

TESTING THE ASPECT HYPOTHESIS IN L2 RUSSIAN

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Submitted to the Graduate Faculty of
Arts and Sciences in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy

University of Pittsburgh

2011

UNIVERSITY OF PITTSBURGH

ARTS AND SCIENCES

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University of Pittsburgh, 2011

Previous research involving the Aspect Hypothesis (AH) has shown that second language (L2) learners are sensitive to lexical aspect when applying grammatical markers, associating perfective-past marking with telic verbs and imperfective past marking with atelic verbs (Andersen, 1991; Andersen & Shirai, 1994). Some studies, however, report that in the initial stages of learning, L2 learners may assign a default past tense form across lexical aspect categories, suggesting that beginning learners may not initially adhere to the AH (e.g., Salaberry, 1999). The primary purpose of this dissertation is to investigate the degree to which L2 learners of Russian at various levels of proficiency adhere to the AH. This dissertation addresses two primary issues: (1) the degree to which L2 Russian learners of varying proficiency levels adhere to the AH, and (2) the conditions under which the AH may or may not be supported. Data from written narratives (N=42) and oral narratives (N=42), elicited using a film clip (*Modern Times*), and oral proficiency interview conversations (N=33) collected from classroom learners of Russian (L1 English) at various proficiency levels were analyzed for lexical aspect and tense-aspect marking with comparable data from native Russian speakers (N=18). The results indicate that the AH is supported to varying degrees dependent on task type and proficiency level, and that tasks involving lower planning levels (oral narratives and conversations) were generally more supportive of the AH, compared to the written narrative task that involved a higher level of planning. The results also show that beginning-level learners of Russian prefer the imperfective

form in the past tense across the different task types. The results constitute preliminary support for the default past tense hypothesis in that there is a preference for a default marker (whether imperfective or perfective) in the past tense, at least in the beginning stages of language learning by L1 English classroom learners of aspectual languages such as Spanish or Russian. Two factors discussed as possible explanations for the use of default markers are the role of instruction and L1 influence.

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LIST OF ACRONYMS

ACC – Accusative case

AH – Aspect Hypothesis

DBH – Distributional Bias Hypothesis

DPTH – Default Past Tense Hypothesis

Fem – Feminine

Impf – Imperfective aspect

INF – Infinitive

L1 – First language

L2 – Second language

Masc – Masculine

NOM – Nominative case

Perf – Perfective aspect

PREP – Prepositional case

Sing – Singular

TRANSLITERATION GUIDE

The standard for transliteration is taken from Sussex & Cubberley (2006), and follows a model widely accepted by Slavic linguists.

Cyrillic font	Transliteration	Cyrillic font	Transliteration
А	a	П	p
Б	b	Р	r
В	v	С	s
Г	g	Т	t
Д	d	У	u
Е	e	Ф	f
Ё	ë	Х	x
Ж	ž	Ц	c
З	z	Ч	č
И	i	Ш	š
Й	j	Щ	šč
К	k	Ъ (Hard sign)	"
Л	l	Ы	y
М	m	Ь (Soft sign)	'
Н	n	Э	è
О	o	Ю	ju
		Я	ja

PREFACE

I am grateful to the many people who have supported and encouraged me in reaching this goal. I would first like to thank the members of my dissertation committee. I am especially grateful to my dissertation advisor, Yasuhiro Shirai, for his extraordinary patience and efforts in helping me with this study. His questions and responses to my thoughts and ideas were always insightful, and I am appreciative of the many ways he challenged me. I would also like to thank David Birnbaum for taking the time to serve on all of my committees and providing me with much guidance and support throughout the years. Many thanks go to the remaining members of my dissertation committee: Scott Kiesling, for his willingness to always be there to help, David Mortensen, for his insightful queries, and Dawn McCormick, for her calm demeanor and generosity.

While enrolled in the linguistics program here at the University of Pittsburgh, I have learned so much, and I would like to give special thanks to a number of faculty members who have greatly influenced my academic and professional development: Alan Juffs, Christina Bratt-Paulston, Robert DeKeyser, Suzanne Curtin, Pascual Masullo, Tessa Warren, Natasha Tokowicz, Claude Mauk, Greg Mizera, Christine O'Neill, Shelome Gooden, Claire Bradin Siskin, Mary Paster, Helen Stickney, and Maria Piantanida. I thank each and every one of them for sharing their time, knowledge and experiences.

The completion of my doctoral studies would have been unachievable without financial and administrative support. I am particularly grateful to the Andrew Mellon Foundation for its Predoctoral Fellowship, as well as to the Department of Linguistics at the University of Pittsburgh for teaching and research assistantships. I would also like to thank the administrative staff of the Linguistics Department, in particular, Pat Cochran, Irene Wright, Anna Mae Townsend, and Susan Merriman, for their help and support throughout this process. I am indebted to the Department of Slavic Languages and Literatures at the University of Pittsburgh, and the Russian program at the College of William and Mary, for their enormous help with this research project, and I also must thank all of the participants in this study for taking the time to help me. Without them, this research project would have been impossible to complete.

I feel so blessed to have made many wonderful acquaintances during my time here. There are so many whom I wish to thank for their time and willingness to help and listen: Kristopher Geda, Patti Spinner, Lauren Collister, Fawn Draucker, Guillermo Rodriguez, Carrie Bonilla, Katherine Martin, Chris Ortiz, Brian Brubaker, Soudi Abdesalam, Christina Schoux Casey, Ben Friedline, Ilya Bratman, Zoe Luk, Lorraine Denman, Natalie McCarthy and Veronica Lifrieri. I am also lucky to have a friend in Maeve Eberhardt, who has been so generous, supportive and always willing to be there.

There are others who have been so special to me for many years, and whom I must thank: Kent Butts (my undergraduate mentor) and his wife April for their support and generosity, and for inspiring me to undertake this goal. I am also grateful to Al Dobias for being a true friend over these many years. Many thanks also go to the Brisbanes (my “second family”) for their acceptance, generosity and encouragement.

Finally, without my family's support, I never could have gotten this far. I would like to thank my wonderful grandparents and my many aunts and uncles who have been so supportive. My parents Scott and Mary have been there for me through everything; they have always respected my decisions and encouraged me to be who I am. They are a constant inspiration, and there are no words to describe how grateful I am for everything they have done for me. I can also always count on my brother Dave to be there for me; whether for a quick chat about football or a big comforting hug, I know he will be there when I need him. My new sister-in-law Leah has also been a great comfort to me, and I look forward to having her as a sister over the next many years. I also must thank my feline friends, Wenceslaus and Hamlet, for their constant cuddles and purrs, as well as my canine companions, Monty (RIP) and Phyllis, for their endless hugs and tail wags.

And finally, to Craig, my husband and best friend. Your love, respect, and encouragement mean more to me than you will ever know.

1.0 BACKGROUND

Numerous studies have been conducted regarding the second language (L2) acquisition of tense-aspect morphology. A prevailing theory in this field is the Aspect Hypothesis (Andersen & Shirai, 1994; Bardovi-Harlig, 2000; Robison, 1995; Shirai, 1991), which predicts that L2 learners are sensitive to lexical aspect when applying tense-aspect markers; namely, that learners will predominantly attach perfective/past markers to telic verbs, while atelic verbs will receive imperfective markers more often. The Aspect Hypothesis (AH) has been tested crosslinguistically, and a number of these studies appear to support the AH (e.g. Bardovi-Harlig & Reynolds, 1995; Cadierno, 2000; Camps, 2002; Collins, 2002; Shirai & Kurono, 1998). However, Salaberry (1999; 2002) proposes the Default Past Tense Hypothesis (DPTH), which claims that L2 learners in the initial stages of learning may assign a default past tense form (the preterit for L2 Spanish) across lexical aspect categories. This hypothesis suggests that beginning learners may not initially adhere to the Aspect Hypothesis, but that as proficiency level increases, L2 learners show behavior compatible with the Aspect Hypothesis: they appear to take lexical aspect into account when applying tense-aspect markers on verbs.

Generally, little is known about the L2 acquisition of Russian tense-aspect, and the primary purpose of this dissertation is to determine whether L2 learners of Russian acquire aspect in accordance with the Aspect Hypothesis (AH), and to investigate the degree to which L2 Russian learners at various levels of proficiency (beginner to advanced) adhere to the AH in their

production of Russian past-tense forms; specifically whether the Default Past Tense Hypothesis (Salaberry, 1999) can apply to beginning-level learners of L2 Russian.

Shirai (2004) outlines various possible factors (such as L1 influence, input frequency and individual differences) that work together to provide an account for learners' sensitivity to lexical aspect when applying tense-aspect markers to verbs, as well as why the results of some studies (such as Salaberry, 1999) appear to deviate from the predictions of the AH. Thus, another primary purpose of this dissertation is take into account several factors in the testing of the AH; namely, order of instruction, L1 influence, and effect of task type. This study specifically manipulates the task type variable, while order of instruction and L1 influence are hypothesized as additional factors contributing to L2 learners' tense-aspect distribution in production data.

This dissertation will contribute in several ways to the research that has been conducted up to this point involving the L2 acquisition of tense-aspect. First, very little is known about the L2 acquisition of Russian aspect. Although Russian is a well-documented language, and Russian aspect has been the focal point of many descriptive analyses, there has been little research conducted on how L2 learners acquire or learn aspect in Russian. Many research studies have tested the Aspect Hypothesis in a variety of target languages, and this dissertation hopes to add to that body of literature by analyzing the degree to which learners of varying levels of proficiency are sensitive to lexical aspect when applying grammatical markers in L2 Russian. Second, this dissertation will investigate and discuss multiple factors (namely, L1 influence, order of instruction, and difference in task) that can be taken into account when testing the AH and DPTH, thus examining the claims proposed by Shirai (2004): that multiple factors work together in the formation of certain acquisition patterns. Third, not only can this dissertation

have the theoretical significance outlined above, it can also have pedagogical importance, in that one facet of this dissertation explores the effect of instruction on L2 acquisition.

In the remaining sections of this chapter I introduce related terminology and review the relevant literature associated with the acquisition of tense-aspect morphology.

This chapter will also concentrate on aspect in the Russian language and will characterize the imperfective and perfective in Russian. I will also discuss typological differences found in Russian compared to other target languages on which the Aspect Hypothesis has been tested, and include a discussion of how a Vendlerian typology can be applied to lexical aspect in Russian. Chapter 1 concludes with an analysis of acquisition studies that have been conducted on Russian aspect (L1 and L2 studies, as well as studies involving heritage learners), as well as a description of specific factors that will be examined to determine the degree to which the Aspect Hypothesis may or may not be supported (order of instruction, L1 influence and task type).

Chapter 2 introduces two of the three studies that have been conducted in this dissertation. These two studies examine production data in oral and written narratives from L2 learners at various proficiency levels (beginner, intermediate, advanced). These studies discuss how the two modalities (oral versus written) affect tense-aspect distribution. This chapter also presents preliminary findings from a translation task, which was given to the learners in order to explore possible L1 influence, that is, whether learners associate a particular L1 tense-aspect form with an L2 aspectual form. Based on the results, order of instruction and L1 influence is argued to have an effect on how and which aspectual forms are produced.

Chapter 3 outlines the third study, which examines L2 production data from oral conversational interviews. The aspectual distribution from the interviews is compared with that from the oral narratives, and the difference in planning time in these two tasks (oral narratives,

which allow pre-task planning but little online planning, and conversations, which allow no pre-task planning and virtually no online planning) is discussed as a factor that affects how tense-aspect forms are distributed across the different proficiency levels.

Chapter 4 concludes this study by restating how the results and findings contribute to the field. This chapter also identifies remaining questions and proposes avenues of future research.

1.1 TENSE AND ASPECT

A widely accepted definition of aspect is provided by Comrie (1976, p. 3): “aspects are different ways of viewing the internal temporal constituency of a situation.” This can be illustrated by the examples *he read the book* and *he was reading the book*. Both sentences are in the past tense but differ in aspect: the first denotes the perfective, the situation as a whole, whereas the second shows the imperfective, which focuses more on the internal structure of the situation (situation in progress). The perfective typically indicates a completed action or the resultative. The imperfective, on the other hand, shows situations related to the stative, habituality and the progressive.

1.1.1 Grammatical aspect

The opposition between the perfective and imperfective can be encoded grammatically; in other words, the perfective and imperfective aspect can be realized through grammatical processes, like analytic constructions, inflectional or derivational morphology. For example, in English the

progressive is formed by means of an analytic construction (form of auxiliary verb *to be*, plus –*ing* ending on the main verb, as in *I am reading*). This is called grammatical aspect.

1.1.2 Lexical aspect

Besides grammatical aspect, there are also semantic characteristics that define subclasses of verbs, which are based on the temporal nature of the situation that the verb describes. This is called lexical aspect (also situation or inherent aspect). Vendler (1957) was one of the first scholars to distinguish and categorize different types of situations expressed by verbs. The following four verb types are based on Vendler's classification, and their definitions are adapted from Smith (1997, pp. 22-35):

(1) States (also called Statives) describe durative situations (or qualities) that do not change, unless through external influence; for example, *she knows Russian, he believed in the Tooth Fairy*.

(2) Activities are atelic¹, durative situations that can include an ongoing unlimited process, or uncountable internal stages with no inherent endpoint (or where the endpoint of these situations is arbitrary); for example, *she laughed, we danced*.

(3) Accomplishments reflect telic, durative situations or events that lead up to and result in a new state; for example, *they built a new bridge, she wrote a letter*.

(4) Achievements are telic, punctual, instantaneous events that typically result in a new state; *the glass shattered, he reached the summit*.

¹ A common distinction made between telic and atelic events is that telic events involve a change of state resulting in a completed event or final end point (Accomplishments and Achievements), while atelic events (Statives and Activities) are essentially processes that have no end point, or have an arbitrary end point (Smith, 1997, p. 19).

These four situation types reflect possible inherent semantic characteristics of verbs (or verb phrases), and many researchers have examined how these inherent features affect the acquisition of tense and aspect in various languages, both in L1 and in L2 acquisition..

1.2 ACQUISITION OF TENSE AND ASPECT

1.2.1 L1 acquisition

The earliest studies that investigated the acquisition of tense and aspect involved L1 learners. One of the earliest is Bronckart & Sinclair (1973), in which French-speaking children at various ages (2;11 – 8;7) were asked to perform a description task (the children described situations, which were acted out by the researchers through the use of various toys). In the speech of the younger children (2;11 – 5;11), verbs indicating past tense situations with an inherent endpoint were expressed with the *passé composé* (past perfective marking), while verbs without an inherent endpoint were expressed with present tense inflections, rather than the *imparfait* (past imperfective), even if the situation had taken place sometime in the past. Essentially, the *imparfait* (past imperfective) appears later in children's speech, and the present tense used by the younger children can be interpreted as a temporary contrast with the past perfective.

Along these same lines, Antinucci & Miller (1976) investigated the speech of Italian- and English-speaking children and observed that verbs with an inherent endpoint (achievement and accomplishment verbs) received past perfective marking, while durative, atelic verbs (states and activities) were produced in the present tense only. Antinucci & Miller (1976) conclude that “the

meaning of the child's past tense is at this point rather limited. He is able to encode a past event, but only if it results in a present state. Looking at this fact from a linguistic point of view, we could say that the past 'tense' has more of an aspectual than temporal value." (p. 183).

This has led to what some researchers call the Aspect before Tense Hypothesis (Bloom, Lifter & Hafitz, 1980). In this longitudinal study that observed the speech of four children (age range of 23 – 28 months), past tense marking occurred primarily with verbs involving completed or punctual situations, but did not occur with state or activity verbs. In other words, this study found that certain tense-aspect morphemes were used with certain verb stems: the tense-aspect morphemes, such as simple past and progressive, were not used contrastively with the same verb stem as it is in adult speech (p. 405). Bloom et al. thus argue that because inflection markers are redundant with the inherent aspectual semantics of the verbs, the children are strongly influenced by lexical aspect in verb production. However, the authors are careful to mention that the "aspect before tense" principle is a relative notion, and not an absolute one, because children are learning tense simultaneously with aspect. As a result, the degree to which children distinguish aspectual relations before tense may vary from child to child, and language to language.

There have been some objections to the "aspect before tense" theories, and Weist et al. (1984) in fact term this theory the Defective Tense Hypothesis. In this study that examined naturalistic and experimental data, Polish-speaking children demonstrated an acquisition of aspectual contrasts and tense-related contrasts simultaneously early in acquisition: the children (as early as two years old) were able to use tense endings to distinguish grammatical aspect (the perfective vs. the imperfective). Weist et al. thus claim that the results of their study contradict the theory that aspect is acquired before tense. However, as Andersen & Shirai (1996, p. 536) pointed out, it is necessary to mention that these claims contradict the absolute version of the

“aspect before tense” hypothesis, and not necessarily the relative version of the hypothesis: the children do tend to produce past perfective markers with accomplishments and achievements, while past imperfective markers tend to be used with states and activities (Weist et al., 1984, p. 368).

1.2.2 L2 acquisition

The results of the L1 studies outlined above have influenced the research conducted on the L2 acquisition of aspect. One of the earliest L2 studies (Andersen, 1991) involved the order of acquisition. In this study, the verbal production of two adolescent naturalistic learners of L2 Spanish suggested the following order of acquisition in both lexical and grammatical aspect (Table 1):

Table 1. Developmental sequence for encoding tense and aspect with "past" inflections (adapted from Andersen, 1991, p. 314).

	STATES "had"	ACTIVITES "played"	TELIC EVENTS ^a "taught x to y"	PUNCTUAL EVENTS ^b "broke (in two)"
1	Present	Present	Present	Present
2	Present	Present	Present	Preterit
3	Imperfect	Present	Present	Preterit
4	Imperfect	Imperfect	Preterit	Preterit
5	Imperfect	Imperfect	Preterit Imperfect	Preterit
6	Imperfect	Imperfect Preterit	Preterit Imperfect	Preterit
7	Imperfect	Imperfect Preterit	Preterit Imperfect	Preterit Imperfect
8	Imperfect Preterit	Imperfect Preterit	Preterit Imperfect	Preterit Imperfect

Notes: (a) Telic events are equivalent to Vendler's accomplishments.

(b) Punctual events are equivalent to Vendler's achievements.

That is, it is proposed that when students are learning an L2: (1) the past perfective (stage 2) is acquired before the past imperfective (stage 3), (2) achievements (punctual events) and accomplishments (telic events) appear first with past perfective (preterit) tense-aspect markers, and (3) states and activities are first to appear with tense-aspect markers in the past imperfective. Further studies (for example, Housen's 1994 study on L2 Dutch learners) have reported conclusions that coincide with Andersen's findings. This order of acquisition therefore predicts that learners in the earlier stages of acquisition are sensitive to lexical aspect when they apply

grammatical tense-aspect markers to verbs; namely, language learners show tendencies in applying certain tense-aspect markers to verbs containing certain features of lexical aspect.

1.2.3 The Aspect Hypothesis

Along these lines, what is now called the Aspect Hypothesis (AH) was formulated by Shirai (1991, pp. 9-10), and further developed by Andersen and Shirai (1994), Robison (1995), and Bardovi-Harlig (2000). The following predictions² of this hypothesis are proposed to be universals in L1 and L2 acquisition (Li & Shirai, 2000, p. 50):

- (1) In the past tense, learners first tend to mark achievement and accomplishment verbs with perfective markers, then later extend the use of these markers to activity and state verbs;
- (2) For languages that use morphological processes to distinguish the perfective and imperfective, learners produce the perfective past before the imperfective past; additionally, learners begin to mark state and activity verbs with the imperfective, then extend the use of the imperfective to achievement and accomplishment verbs.
- (3) For languages with the progressive aspect, markers that indicate the progressive start with activity verbs, and then extend to accomplishments and achievements.
- (4) In L1 acquisition, it is rare to find incorrect overextensions of progressive markings to statives.

Essentially, the AH incorporates the predictions of Andersen (1991), in that learners are sensitive to lexical aspect when applying grammatical tense-aspect markers, and there is a particular order in which these markers appear in acquisition. In other words, the AH makes

² Because Russian does not have the progressive, Statements 3 and 4 are not applicable to the present study. Thus, statements 1 and 2 only can be applied to this study.

associative predictions (i.e., telic verbs are often inflected for the perfective, atelic verbs for the imperfective), as well as developmental predictions. There are two developmental predictions: (1) the perfective past is acquired before the imperfective; and (2) the distribution between lexical and grammatical aspect starts out prototypical (telics with the perfective, atelics with the imperfective), then gradually extends this distribution to less prototypical (more telics with the imperfective, more atelics with the perfective); essentially, the association between lexical and grammatical aspect becomes weaker.

The AH has generated a great deal of subsequent research, and Table 2 is a summary of how the results of a number of these studies in the acquisition of both Indo-European and non-Indo-European languages appear to support this hypothesis to varying degrees. Throughout this chapter, a number of these studies most relevant to the background of this research project will be described in more detail.

Table 2. Aspect Hypothesis studies in adult second language acquisition

Author, year	Target Language	L1	N	Learner Characteristics	Task(s)	AH Support
Bardovi-Harlig, K. & Reynolds, D., 1995	English	mixed	182	Classroom ESL (intensive, beginning-advanced Ss)	cloze	yes
Bergström, A., 1995	French	English	117	Classroom FFL (1 st -3 rd year students)	Written film retell, cloze	mixed
Cadierno, T., 2000	Spanish	Danish	10	Classroom SFL (advanced Ss)	Oral/written narratives	yes
Camps, J., 2002	Spanish	English	15	Classroom SFL (1 st year Ss)	Oral narratives	yes
Collins, L., 2002	English	French	70	Classroom ESL (intensive, low-intermediate-intermediate Ss)	Cloze, written film retell	yes
			91	Classroom ESL (intensive, beginning-high-intermediate Ss)	Cloze, preference task	yes
Comajoan, L., 2006	Catalan	mixed	3	Classroom CFL (multilingual learners)	narratives	inconclusive
Giacalone-Ramat, A., 2002	Italian	English, German	8	Adult, mostly tutored, living in country where target language is spoken	Conversational interviews	yes
Ishida, M., 2004	Japanese	English, Chinese	4	Classroom JSL (4 th -5 th semester Ss)	Conversational interviews (time-series design)	no
Labeau, E., 2005	French	English	61	Classroom FFL (advanced Ss)	Oral/written film retell, cloze, written editing task	inconclusive
Leary, A., 1999	Russian	English	40	Classroom RFL (1 st -4 th year students)	Written film retell	yes
Robison, R., 1995	English	Spanish	30	Classroom EFL	Oral interview	yes
Salaberry, R., 1999	Spanish	English	20	Classroom SFL (beginning-advanced level Ss)	Oral narrative (film retell)	yes (higher level); inconclusive (beginners)
Shirai, Y. & Kurono, A., 1998	Japanese	Chinese; mixed	3; 17	Classroom JSL (intensive); Classroom JSL (intensive)	Oral interview; Acceptability judgment (longitudinal)	yes; yes

1.2.4 Distributional Bias Hypothesis

The Distributional Bias Hypothesis The Distributional Bias Hypothesis (Andersen & Shirai, 1994; 1996) claims that there is a bias in the use of verbal morphology in the speech of native speakers (that is, that atelic verbs (states and activities) tend be used with the imperfective, and telic verbs (accomplishments and achievements) are used with the perfective), and that this bias is consistent with what is predicted by the AH. Then, when learners begin to learn the L2, they use verbal morphology in the same biased way (but in a more dramatic fashion) because this is what they have been exposed to in the input.

For Russian, the DBH would predict that in their speech, native speakers would tend to associate the perfective with accomplishments and achievements, and the imperfective with states and activities. And, if L2 learners are exposed to this native biased speech, they would assign verbal morphology that is compatible with the AH. However, some studies (e.g. Salaberry, 1999; 2002, further discussed in section 2.2.4) have shown that beginning-level learners appear to produce verbal forms in a way that is not consistent with the AH, in that there is no distributional bias in the initial learning stages; rather, these learners appear to assign a default past tense form instead of showing a sensitivity to lexical aspect when assigning verbal morphology. In response to this, Shirai (2004, p. 103) suggests that as proficiency levels increase, the association between verbal morphology and lexical aspect strengthens, as far as production data are concerned. In other words, at the beginning stages of learning, this association between verbal morphology and lexical aspect is weaker, and as a result, L2 learners may initially produce verbal forms arbitrarily until they can connect the semantic meaning with the morphological form. The present study thus intends to test whether L2 learners of Russian

(particularly those at the beginning stages) are inclined to incorporate a weaker connection between verbal morphology and lexical aspect when producing aspectual forms.

1.2.5 Prototype Hypothesis

The above observations of the order of acquisition have led to a prototype account of the acquisition of tense-aspect morphology (Shirai, 1991; Andersen & Shirai, 1994; Shirai & Andersen, 1995), which were further developed in the formation of the Prototype Hypothesis (Li & Shirai, 2000), which states that early in acquisition “children create semantic representations of tense-aspect morphology which are restricted to the prototype of the morphological category” (p. 66). An example of this would be the *-ing* ending for the English progressive: children begin to use this ending only with activity verbs, then gradually with accomplishments and achievements. This shows that children have predetermined that activities are more prototypical for the progressive ending, then accomplishments as peripheral to the prototype, and then achievements least prototypical. This hypothesis essentially proposes that the learners’ distributional analyses of the input are the source of the prototypes, and Li & Shirai thus argue in favor of “a connectionist model in which semantic representations emerge out of the learning of the relationships among lexical forms, morphological markers, and semantic features of verbs” (p. 69). With such a connectionist model, the learner, by means of a neural network system, computes the probabilities of the degree to which semantic features, lexical forms and morphological markers co-occur.

Li & Shirai (2000) further propose that a prototype account can be applied to L2 acquisition of tense and aspect and examine data from a number of L2 studies (e.g. Wenzell,

1989; Bardovi-Harlig, 1992; Robison, 1995; Bardovi-Harlig & Reynolds, 1995; Bardovi-Harlig & Bergström, 1996; Rohde, 1996). As a result, a number of generalizations were observed in relation to a prototype account of L2 acquisition of tense/aspect. One was that L2 learners most frequently used prototypical combinations (like using the progressive with activities, and assigning the simple past to punctual and telic verbs), but in oral and written production data, the association of prototypes was not as strong with beginning-level learners and was much stronger with more intermediate-level learners. However, in paper and pencil tests such as cloze tasks, where learners had to provide past tense forms in an obligatory context, the results were very consistent with the Prototype Hypothesis. The Prototype Hypothesis seems to be supported by L2 studies, but to varying degrees and not as consistently as in L1 studies. Li & Shirai (2000, pp. 87-89) suggest several reasons why the L2 and L1 acquisition studies differ, such as L2 learners' possible reliance on rote-learning strategies and L2 learners' already existent discourse skills and metalinguistic knowledge (see also Shirai, 2004).

1.2.6 Default Past Tense Hypothesis

Although many L2 acquisition studies have shown support for the Aspect Hypothesis, Salaberry (1999), a study on English-speaking classroom learners of Spanish as a second language, presents conflicting results. The participants were all college-level students at various levels of proficiency (low-level learners to more advanced learners), and they were asked to provide two different oral narratives two months apart (the narratives being responses to two silent film clips from the movie *Modern Times*). The results of the study illustrated that the lowest-level learners used a single marker (the preterit, or perfective past) to express the past tense, regardless of the

verbs' inherent lexical properties. One possible reason for this is that the students did not have enough experience with any other past tense markers at that point in their learning (as suggested by Shirai, 1997). Salaberry (1999, p. 167) argues, however, that these learners were capable of marking the past (imperfect) with some verb phrases, but that they showed a preference for a single form (the preterit). Although the lower-level learners appear to contradict the predictions proposed in the AH, the learners at the other, higher levels of proficiency did show a correlation between past tense morphology and the inherent semantic characteristics of the verbs. The findings from Salaberry (1999) thus suggest that although these students initially seem to have a default past tense marker at the lower stages of L2 learning, they become much more sensitive to lexical aspect when applying tense-aspect markers as their proficiency level increases. Similar results were obtained in follow-up studies (Salaberry, 2000; 2002), which involved cloze and editing (written) tasks.

The Default Past Tense Hypothesis (DPTH) proposed by Salaberry (1999) has also seen support in Wiberg (1996). Wiberg (1996) investigated how bilingual (Italian-Swedish) children refer to situations in the past tense. The target language in this study was Italian (the non-dominant language) and one of the research questions posed was whether these bilinguals are influenced by lexical aspect when they make a choice between the perfective (*passato prossimo*) and imperfective (*imperfetto*) in the past tense. In this study, conversational data from partially planned dialogues were analyzed from twenty-four children (ages 8-17), who were placed into one of four levels of linguistic competency. The results indicate that the lower-level speakers (especially those in the first level) tended to use the past participle form of the *passato prossimo*³ as a default form, regardless of the verb's lexical aspect. As the competency level of these

³ The *passato prossimo* in Italian is an analytic construction containing an auxiliary verb plus the past participle of the main verb. To express the past tense, the lower-level speakers used the participle only, and no auxiliary verb.

speakers increase, however, the *imperfetto* and *passato prossimo* begin to be used more consistently with the predictions of the AH: the speakers tend to use the *imperfetto* with statives and activities, and although the *passato prossimo* is used with all verb types, there is a preference to use it with telic verbs (this differs from the results of Antinucci & Miller's (1976) L1 acquisition study, and from Giacalone Ramat's (1995) study on untutored learners of L2 Italian , which showed that learners were partial to using the *passato prossimo* with telic verbs in the beginning stages of acquisition).

Although the results of these studies are similar in their support of the DPTH, there are some differences in the explanations as to why learners appear to use a default form. Salaberry (2008) proposes several factors that can influence why L2 learners prefer a default form. Two of these factors are L1 influence and distributional tendencies in the L2. Regarding L1 influence, where L2 Spanish learners have English as their L1, Salaberry (2008, p. 215) proposes that the learners correlate the English simple past (which conveys primarily tense rather than aspectual meanings, and is used flexibly with all lexical aspect types) with the Spanish preterit (which Salaberry argues is the prototypical past tense marker). Salaberry (2008) also identifies distributional tendencies in the L2 (such as those proposed by the DBH) as another reason why learners may initially use a default marker. In other words, Salaberry (2008, p. 220) suggests that because the preterit is frequent compared with imperfective past in the input, L2 learners tend to use the preterit as a default past tense marker.

On the topic of L1 influence, Wiberg (1996), argues that L1 is not much of a factor in her study. The L1 (Swedish), which is a typologically different language from the L2 (Italian) with regard to tense formation, does not affect the order in which the tenses appear; the data appear to

support the acquisition order of tense forms found among other L2 Italian learners, regardless of L1 (Wiberg, 1996, p. 1109).

When interpreting the data in light of distributional tendencies in the input, Wiberg (1996, p. 1110) argues that discourse type is another factor that must be taken into account – in a dialogue-type discourse that involves personal narratives, the behavior of the *imperfetto* (the tendency to appear with states and activities) is more consistent with the AH, but that the *passato prossimo* is the tense most frequently used and acts as an unmarked tense in conversational discourse involving personal retellings because it appears with all lexical verb types.

Before discussing how the above hypotheses are relevant to the L2 acquisition of Russian, the following section will outline the properties of tense and aspect in Russian.

1.3 TENSE AND ASPECT IN RUSSIAN

The tense-aspect system in Russian is morphologically and semantically complex, and is often considered in the pedagogical literature to be one of the most difficult grammatical features in Russian for L1 English speakers to acquire (Andrews, E. et al., 1997; Offord, D., 1996; Clobberly, 2002). To illustrate this, I outline below how grammatical and lexical aspect are realized in Russian.

1.3.1 Grammatical aspect in Russian

Grammatical aspect in Russian has the perfective-imperfective opposition, but this distinction is seen only in the past and future tenses. Table 3 outlines how the interaction of tense and aspect in Russian is realized through certain grammatical processes (namely, synthetic and analytic constructions).

Table 3. Interaction of tense and aspect in Russian

	Imperfective	Perfective
Tense		
Past	Synthetic construction <i>Čita-l</i> ‘he read/he was reading’	Synthetic construction <i>Pro-čita-l</i> ‘he read/he had read/he has read/he did read’
Present	Synthetic construction <i>Čita -et</i> ‘he reads/he is reading’	N/A
Future	Analytic construction (verbal auxiliary) <i>Budet čitat’</i> ‘he will read/ he will be reading’	Synthetic construction <i>Pro-čita-et</i> ‘he will read’

Essentially, the imperfective in Russian can occur in all three tenses, while the perfective can be seen only in the past and future tenses. The perfective in Russian is not compatible with the present tense, since the present tense in Russian can express the stative, the progressive, and habituality (all of which are generally incompatible with the perfective). The aspectual opposition of the perfective and imperfective will be illustrated in the following two subsections in more detail; namely, these subsections will outline the functions of the imperfective and

perfective in Russian and how they are understood semantically and pragmatically. This section will then continue with an explanation of how the aspects are differentiated through morphological processes.

1.3.1.1 The Russian perfective

Many commonly used beginning-level L2 Russian textbooks at the university level (i.e., *Live from Russia*, *Golosa*, *Nachalo*⁴) identify Russian verbs with perfective markers as verbs indicating a one-time completed action. However, a completed action alone is not sufficient when characterizing the perfective (as will be shown in the following subsection, the imperfective in Russian can indicate a completed action as well), and could be one reason why many L2 learners struggle with the usage of the aspects as they progress in their language learning. Forsyth (1970), in particular, argues that completion alone is not adequate when defining the perfective and instead provides the following, less concrete definition of the perfective (p. 8): “a perfective verb expresses the action as a total event summed up with reference to a single specific juncture.” Forsyth then continues to identify several functions of the perfective in Russian that are related to the above definition.

First, a verb containing perfective markers must bring about a change of state; that is, the verb must mark a transition point between two states. For example, *byl televizor* (there was a television) – *ona slomala televizor* (she broke^{Perf} the television) – *televizor slomannyj* (the

⁴ Lekic, M., Davidson, D., Gor, K. & American Council of Teachers of Russian, 2nd ed. (2008). *Russian Stage One: Live from Russia: Volume 1*. Dubuque, IA: Kendall/Hunt; Lubensky, S., Ervin, G., McClellan, L. & Jarvis, D. (2001). *Nachalo*. New York: McGraw Hill; Robin, R., Robin, J. & Henry, K. (1998). *Golosa*. Upper Saddle River, NJ: Prentice-Hall, Inc.

television is broken). In this case, the perfective form of the verb “break” indicates a shift from one state (the existence of a television) to another state (a broken television).

Forsyth classifies another function of the perfective as pragmatic in nature, in which the speaker emphasizes: (1) a new state produced by the action; or (2) the result and/or consequences of the action. The implication of such a function is that the result of the action remains in effect after the event is described, up to the moment of speech or up to the time when another action reported consequently annuls the result. A classic example of this pragmatic function is the utterance *on otkryl okno* ‘he opened^{Perf} the window.’ The speaker can intend one of two meanings: (1) he opened the window, and the window is still open at the time of speech; or (2) he opened the window, and the speaker’s narrative will then be followed by a subsequent action annulling or minimizing the importance of the result (such as ‘he opened the window and then crawled out’). Because of this function, the perfective in Russian is often classified as being compatible with expressions containing a sequence of actions, in which the result of one action is often a necessary precursor to another action: for example, *ona otkryla dver’ i vošla* ‘she opened^{Perf} the door and walked^{Perf} in’ (in which the entering could not occur before the opening of the door); or *on vstal, odelsja i poexal na rabotu* ‘he got up^{Perf}, got dressed^{Perf} and went^{Perf} to work’ (where getting up is a precursor to getting dressed, which then is under most circumstances a precondition for going to work).

Essentially, according to Forsyth (1970), Russian verbs with perfective markings contain several elements of meaning. One is lexical in nature, where the verb identifies the type of action involved, i.e. ‘write’ as opposed to ‘read’ or ‘play.’ The other elements are grammatical and aspectual in nature – Russian verbs indicating the perfective do not need any additional context or accompanying adverbial phrases to specify the perfective meaning, because that

meaning is already inherent to the verb form. For example, when a speaker makes the statement *ona napisala knihu* ‘she wrote^{Perf} the book,’ it is very clear that the action of writing has been done in totality, and that there is an emphasis on the result or consequences of said action. For verbs that indicate the imperfective, on the other hand, such grammatical and aspectual meanings are not as clear, as will be seen in the following subsection.

1.3.1.2 The Russian imperfective

The imperfective in Russian is a much more nebulous category than its perfective counterpart, and therefore defining its semantic and pragmatic functions is more difficult. The imperfective is often associated with the notions of continuous action, the progressive, repetition and habituality, but these concepts are not inherent to imperfectivity (Forsyth, 1970, p. 4); rather, this depends largely on context or adverbial accompaniment. For example, the phrase *on pisał pis'mo* ‘he wrote^{Impf} a letter’ can have a number of interpretations:

(1.1) *On pisał pis'mo, kogda ja pozvonila* ‘he was writing^{Impf} a letter when I called^{Perf},
(continuous action/progressive)

(1.2) *On pisał pis'mo každiju nedelju* ‘he wrote/would write/used to write^{Impf} a letter
every week’ (repetition/habituality)

(1.3) – *Čto on delal včera večerom? – On pisał pis'mo.* ‘– What did he do^{Impf} last night?
– He wrote^{Impf} a letter.’ (completed action)

Example (1.3), indicating a completed action, illustrates an interpretation that appears to be more compatible with perfectivity, rather than imperfectivity. This usage of the imperfective has been

traditionally called *konstatacija fakta dejstvija* (Forsyth, 1970, p. 82), or ‘statement of fact,’⁵ and this function of the imperfective is very common in Russian and is often used in more vague contexts, where no emphasis is placed on the results or consequences of the action, although the direct object following the verb (without any other context or adverbial accompaniment) implies completion. Such contexts often involve the interrogative, as in example (1.3), or a situation where the speaker simply wants to identify the kind of action that took place without making any reference to aspectual meaning. For example:

(1.4) *Ja emu zvonila včera* ‘I called^{Impf} him yesterday’

The speaker of example (1.4) would simply intend to indicate that a phone call was made (to name the type of action that took place); it would be unnecessary to use the perfective counterpart of this verb if a focus on the result of this action is unwarranted in the narrative or conversation.

Another function of the imperfective in Russian involves what is sometimes called a “two-way action” (Forsyth, 1970) or an “annulled action” (Andrews et al., 1997). The verbs that fall under this pragmatic function involve an action and then the reverse of that action. For example:

(1.5) *On otkryval okno* ‘he opened^{Impf} the window (he had the window open)’

In (1.5), the use of the imperfective indicates that the window has been opened, but is shut at the time of speech. Compare this to the discussion of the perfective in 1.3.1.1, where the perfective counterpart of this utterance – *on otkryl okno* ‘he opened^{Perf} the window’ – can imply that the

⁵ However, Forsyth argues that this label is not a sufficient one when categorizing this particular usage of the imperfective because “reporting the fact that an action occurred is quite as much a function of the perfective verb as of the imperfective” (p. 82).

window has been opened and is still open at the time of speech. Only certain verbs semantically compatible with reversible, two-way actions fall under this category. Some commonly used verbs of this type include: *otkryvat'* 'open^{Impf}'; *vključat'* 'turn/switch on^{Impf}'; *brat'* 'take/borrow^{Impf}'; *vstavat'* 'get up^{Impf}'; *davat'* 'give^{Impf}'.

The semantic and pragmatic functions of the aspects in Russian are summarized below.

The perfective indicates:

- A change of state (transition point between two states)
- An emphasis on the new state brought about by the action; or
- An emphasis on the results/consequences of the action
- The type of action involved, but no additional context is necessary to identify the pragmatic functions of the perfective

The imperfective, on the other hand, indicates:

- A 'statement of fact,' where no emphasis is placed on the results or consequences of the action
- An 'annulled action,' where an action and then the reverse of that action occurs
- The type of action involved, where additional context or adverbial accompaniment is necessary to identify any further pragmatic functions of the imperfective (such as habituality or continuous action)

In addition to understanding the above functions, L2 learners of Russian must also learn how the aspects in Russian are distinguished morphologically. The following subsection outlines this distinction.

1.3.1.3 Morphology of Russian aspect

The imperfective-perfective opposition in Russian is encoded grammatically, and the Russian grammatical aspectual forms are morphologically very salient. Russian can differentiate the perfective-imperfective in different ways. One way is through suppletive forms. For example:

(1.6) *Govorit'* (to speak, say^{Impf}) – *skazat'* (to say, tell^{Perf})

(1.7) *Brat'* (to take^{Impf}) – *vzjat'* (to take^{Perf})

Another way (and the most common way) to differentiate the perfective-imperfective in Russian is through prefixation and other kinds of affixation. Several examples follow (bold text indicates the aspectual marker):

(1.8) *Pisat'* (to write^{Impf}) – ***na-****pisat'* (to write^{Perf}) ⇒ prefixation

(1.9) *Prygat'* (to jump^{Impf}) – *pryg-**nu**-t'* (to jump^{Perf}) ⇒ suffixation

(1.10) *Zakry-**va**-t'* (to close^{Impf}) – *zakryt'* (to close^{Perf}) ⇒ suffixation

Verbal affixes in Russian can mark either the perfective or imperfective. Example (1.8) illustrates the addition of a prefix to an imperfective form to indicate a perfective meaning (this morphological process is the one that is explicitly and more prevalently taught to L2 learners when they are first introduced to the concept of Russian aspect). Example (1.9) indicates the semelfactive suffix *-nu*, which is added to a verb to denote a single occurrence of an activity that is cyclical. In other words, the imperfective *prygal* could be interpreted as 'he jumped (kept jumping)' or 'he was jumping,' while the perfective *prygnul* means 'he jumped (once).' Other commonly used verbs of this type include: *maxat'* (to wave^{Impf}) – *maxnut'* (to wave^{Perf}); *kričat'*

(to shout^{Impf}) – *kriknut'* (to shout^{Perf}); *stučat'* (to knock^{Impf}) – *stuknut'* (to knock^{Perf}); *kašljat'* (to cough^{Impf}) – *kašljanut'* (to cough^{Perf}). Example (1.10) indicates a suffix that is indicative of an imperfective interpretation. In this case, a suffix (the allomorphs *-va*, *-yva*, or *-iva*) is added to the perfective form to indicate the imperfective. A more detailed discussion of aspectual affixation in Russian is provided below.

First, it is necessary to mention that L2 learners are generally taught that Russian verbs come in “pairs”, that is, most imperfective verb forms have a perfective counterpart, and vice versa (Andrews, E. et al., 1997, p. 21). For example, the verb *pisat'* ‘to write^{Impf}’ is imperfective, and can indicate habituality or continuous action (progressive). Its perfective counterpart is *na-pisat'*, which focuses on a completed action or result. Both verbs mean ‘to write’ and both verbs can be found in any Russian dictionary under the lexical entry ‘to write.’ The prefix *na-* in this case adds nothing to the lexical meaning of the verb – it serves only as an indication that the verb is perfective. In fact, Forsyth (1970, p. 39) notes: “verbs such as *pisat'* and *napisat'*, ... are habitually used by Russian speakers as if they were lexically synonymous partners between which no difference is felt other than aspect.”

Expanding on Example (1.8), there are at least eighteen prefixes in Russian that can be added to the imperfective form of the verb to make it perfective.⁶ When applied to some verbs, many of these prefixes can indicate perfectivity alone, that is, they can act as indicators that the verb is perfective and do not add any other semantic meaning to the verb (as in *na-pisat'* ‘to write^{Perf}’). However, each of these prefixes also has sublexical meanings when applied to other verbs, where the prefix can impart an additional meaning to the verb (see Figure 1 below). This

⁶ Commonly used prefixes: *v-*, *vz-*, *do-*, *za-*, *iz-*, *na-*, *nad-*, *o-*, *ot-*, *pere-*, *po-*, *pod-*, *pri-*, *pro-*, *raz-*, *s-*, *u-*. Additionally, there is no systematic way to predict which prefixes attach to which verbs to make them perfective. This is a point of difficulty for non-native speakers.

is the case for all Russian prefixes – for certain verbs they can serve as pure perfectivizers⁷, while for other verbs, the same prefixes can include additional sublexical meanings. For example, the prefix *na-* in *na-pisat'* (to write^{Perf}) does not alter the meaning of ‘to write’; it is simply the perfective form. However, when the same prefix is added to the verb *teč'* ‘to flow’, the verb *na-teč'* changes the lexical meaning to ‘to accumulate^{Perf} (of water)’. Another example to show how these prefixes can add additional meanings to the perfective is as follows: the prefix *s-* can be added to the verb *delat'* ‘to do^{Impf}’, to indicate the perfective: *s-delat'* ‘to do^{Perf}’. However, when the same prefix is added to the verb *pisat'* (to write^{Impf}), a new lexical item is formed: *s-pisat'* ‘to copy^{Perf}’. Figure 1 is an illustration of this morphological complexity⁸ with the verb *pisat'* ‘to write’, in that it shows how the various prefixes can create new lexical items. In many cases these new lexical items are semantically related to the action of writing; however, in some cases, semantic extension occurs. For example, *opisat'* ‘to describe^{Perf}’, can refer to spoken or signed speech as well as writing, and *zapisat'* ‘to record^{Perf}’, can indicate audio recording. In addition to the number of prefixes, this figure also shows how the newly prefixed forms can then be imperfectivized, in this case with the suffix *-yva*.

⁷ However, Forsyth (1970, p. 39) mentions two of the earliest Russian aspect scholars who completely reject the idea of aspectual pairs (Maslov, 1959, pp. 176-177; Isačenko, 1962, pp. 358-365).

⁸ The morphological complexity described in this section raises a debate of whether Russian aspect can be considered a lexical or grammatical category, and whether its morphology can be regarded as inflectional or derivational. For a more detailed discussion of these issues, see Bybee (1985), Filip (2000), and Percov (1998), among others.

Imperfective	Perfective	Derived Imperfective	Meaning
Pisat'	na-pisat'	N/A	to write
	po-pisat'	po-pis-yva-t' (coll.)	to write for a while
	s-pisat'	s-pis-yva-t'	to copy
	pro-pisat'	pro-pis-yva-t'	to prescribe, register
	is-pisat'	is-pis-yva-t'	to cover with writing
	o-pisat' → o-pis-yva-t'		to describe
	u-pisat'	u-pis-yva-t' (coll.)	to gobble up
	ot-pisat'	ot-pis-yva-t' (arch.)	to confiscate, bequeath
	vy-pisat'	vy-pis-yva-t'	to write out
	pri-pisat'	pri-pis-yva-t'	to add (to something written)
	za-pisat'	za-pis-yva-t'	to record, jot down

Figure 1. Perfective prefixation and imperfective suffixation in Russian

As can be seen in Figure 1, the imperfectivizing suffix *-yva* (like some perfectivizing prefixes) adds nothing to the lexical meaning of the verb in Russian; it is simply an indicator of aspect, as the verbs *perepis-yva-t'* (to rewrite^{Impf}) and *perepisat'* (to rewrite^{Perf}) can be considered aspectual verbal pairs. The concept of aspectual pairs has persisted throughout many theoretical works on Russian aspect, and is often used by Russian scholars, such as Švedova (1980), Tixonov (1998), Petruxina (2000), Zaliznjak & Šmelëv (2000), as a starting point when describing Russian aspect.

However, although the concept of verbal pairs may be applicable and even a necessary concept when L2 learners are first introduced to aspect, the reality of the Russian verbal system is more complex. For instance, Russian has a number of bi-aspectual verbs, where the verb form can indicate either the perfective or imperfective. For such verbs, context is necessary to

determine the aspect, as the following examples with the verb *ispol'zovat'* (to use^{Impf/Perf}) illustrate⁹:

(1.11) *Moj ded obožal gotovit', on vseгда ispol'zoval mestnye produkty.* 'My grandfather adored^{Impf} cooking, he always used^{Impf} local products'

(1.12) *Pri etom vtoričnyj rynek uže polnost'ju ispol'zoval svoi vozmožnosti.* 'Here the secondary market already completely used (up)^{Perf} its resources'

In examples (1.11) and (1.12) the aspect of the verb is known through adverbial accompaniment ('always,' 'completely'), rather than through verbal morphology. Other commonly used verbs that are bi-aspectual include *issledovat'* (to research/examine^{Impf/Perf}), *ženit'sja* (to marry (of men)^{Impf/Perf}), *organizovat'* (to organize^{Impf/Perf}), *obeščat'* (to promise^{Impf/Perf}), and *rekomendovat'* (to recommend^{Impf/Perf}).

In addition to bi-aspectual verbs, there are also verbs in Russian that are uni-aspectual; that is, verbs that may indicate the imperfective and not have a perfective counterpart, and vice versa. Such verbs are uni-aspectual because they have inherent semantic meanings that are incompatible with the counterpart aspect. For example, the verbs *naxodit'sja* (to be located^{Impf}), *ljubit'* (to love^{Impf}) and *znat'* (to know^{Impf}) have no perfective counterpart because they are stative verbs, and states are generally incompatible with the perfective. Although there are some stative verbs in Russian that morphologically appear to have a perfective counterpart, the perfective markings of these verbs indicate an inchoative meaning, for example: *bolet'* (to be sick/ill^{Impf}) – *zabolet'* (to fall ill^{Perf}); *molčat'* (to be silent^{Impf}) – *zamolčat'* (to stop talking^{Perf}).¹⁰

⁹ Both examples are adapted from *Nacional'nyj korpus russkogo jazyka* 'The Russian National Corpus': <http://ruscorpora.ru/>.

¹⁰ Additionally, the perfective forms of these verbs already have different imperfective counterparts. The imperfective counterparts to *zabolet'* and *zamolčat'* are *zabolevat'*, and *zamalčivat'*, respectively.

Other uni-aspectual verbs with no perfective counterpart involve certain activity verbs, which are incompatible with the perfective because there is no necessary result or conclusion implied. Some verbs of this type include *spat'* (to sleep^{Impf}), *rabotat'* (to work^{Impf}), *učastvovat'* (to participate^{Impf}), *plakat'* (to cry^{Impf}), *tancevat'* (to dance^{Impf}) and *mečtat'* (to dream^{Impf}). Any perfective markings added to these verbs would either have an inchoative meaning (such as *zaplakat'* 'to start crying^{Perf}') or a delimitative meaning, which indicates that the activity's duration has been cut short or limited: *pospat'* (to sleep for a while^{Perf}), *poplakat'* (to cry for a little while^{Perf}), *porabotat'* (to work for a while^{Perf}) and *potancevat'* (to dance for a while^{Perf}).

Finally, there are some uni-aspectual verbs that contain a perfective meaning only and are not paired with an imperfective counterpart. These verbs generally denote an instantaneous or sudden change of state: *ruxnut'* (to collapse^{Perf}), *tresnut'* (to crack^{Perf}), *očutit'sja* (to find oneself^{Perf}) and *skončat'sja* (to die^{Perf}). However, although most unpaired perfective verb forms tend to indicate an instantaneous change of state, not all verbs denoting an instantaneous, sudden change of state are unpaired perfectives – for example, *lomat'* (to break^{Impf}) – *slomat'* (to break^{Perf}); *prosypat'sja* (to wake up^{Impf}) – *prosnut'sja* (to wake up^{Perf}). Incidentally, it is interesting to consider why certain verbs with a perfective meaning are uni-aspectual and why they do not have an imperfective counterpart indicating a habitual meaning (for example, it would be semantically plausible for a verb like *očutit'sja* (to find oneself^{Perf}) to be able to indicate habituality). From a theoretical standpoint, this question is one worth investigating further.

In the above description on uni-aspectual verbs in Russian, the idea of the verbs' inherent semantic meaning has been pointed out as a necessary factor as to why a verb is (or must be) uni-

aspectual. The following section will thus outline and discuss the major characteristics of lexical aspect in Russian.

1.3.2 Lexical aspect in Russian

Like grammatical aspect, lexical aspect in Russian displays some distinctive features. Smith (1997) outlines the semantic characteristics of dynamism, completion, non-detachability and duration, which are indicators of the temporal features in the different lexical types (Statives, Activities, Accomplishments, Achievements).

Dynamism is seen in non-stative situations, and defines events that require energy and often agency. As a result, dynamism is compatible with activities, accomplishments and achievements, and in Russian can be expressed through either the imperfective or perfective aspect.

Completion involves telic situations, which entail a change of state cumulating in a completed situation or final end point. Completion is compatible with accomplishments and achievements; additionally, situations involving completion can often be accompanied by certain prepositional phrases (such as *za pjat' minut* 'in five minutes') or adverbs (like *polnost'ju* 'fully', *sovershenno* 'entirely', *sovsem* 'completely') to indicate that a final end point has been achieved. The perfective aspect is required when expressing completion.

Non-detachability "relates the process part of an event to its outcome. Th(is) property distinguishes Accomplishments from Achievements" (Smith, 1997, p. 43). Smith argues that this relationship between the process and outcome of a situation involves entailment; that is, the

process of an accomplishment took place if the outcome of that accomplishment is attained. An example is as follows: saying *ona napisala pis'mo* (she wrote^{Perf} the letter) entails *ona pisala pis'mo* (she wrote/was writing^{Impf} the letter); that is, the outcome that is expressed in the perfective must entail the process expressed through the imperfective. This differs from achievement verbs because achievements are instantaneous changes of state, involving no process (or a process of extremely short duration) leading up to that change of state. For example, *on slomal stol* 'he broke^{Perf} the desk' does not necessarily entail *on lomal stol* 'he broke/was breaking^{Impf} the desk' – the imperfective counterpart of this verb indicates that whether the action has been completed is either unknown or irrelevant to the speaker.

Sentences with duration occur with adverbials of duration, which may include adverbs like *dolgo* (for a long time); prepositional phrases such as *do trëx* (until 3 o'clock); and noun phrases like *ves' večer* (all evening) or *tri časa* (for three hours). Additionally, verbs like *načat'* (to begin), *prodolžat'* (to continue) and *perestat'* (to stop, quit) require durative verbal complements in the imperfective (Smith, 1997, p. 243), for example: *prodolžal čitat'* (he continued^{Impf} to read^{Impf}); *načala rasskazyvat'* (she began^{Perf} to tell^{Impf}); *perestal rabotat'* (he stopped^{Perf} working^{Impf}). Duration can be expressed through either the imperfective or perfective (with accomplishments) aspects.

Table 4 below is an illustration of the interaction between the semantic characteristics and the lexical aspect types.

Table 4. Lexical aspect types and semantic features (Smith, 1997, pp. 22-35)

	Duration	Dynamism	Completion	Non-detachability
Stative	+	-	-	N/A
Activity	+	+	-	N/A
Accomplishment	+	+	+	+
Achievement	-	+	+	-

The following subsections will outline how Russian expresses lexical aspect by way of the semantic features of duration, dynamism, completion and non-detachability.

1.3.2.1 States

State (or stative) verbs in Russian are only imperfective and are compatible with duration but not with dynamism or completion:

(1.13) *Kreml' naxoditsja v Moskve* (the Kremlin is located^{Impf} in Moscow)

(1.14) *On znaet russkij jazyk* (He knows^{Impf} Russian)

(1.15) *On ljubil ee vsju žizn'* (He loved^{Impf} her his whole life)

Stative verbs can be transitive (as in examples 1.14-15), intransitive (example 1.13), or can receive a sentential complement (*Ja dumaju, čto...* - I think^{Impf} that...). It is also important to note that some statives can appear to have perfective counterparts, but these verbs with perfective markers are not statives, but rather can be considered Achievements (Smith, 1997, p. 249). Compare the following two sentences:

(1.16) *Sovy vidjat noč'ju* (Owls see^{Impf} at night – Stative)

(1.17) *On ee pervyj uvidel* (He saw^{Perf} her for the first time – Achievement).

Additionally, like in English, elements following the verb can influence the lexical aspect type: for example, the verb *dumat'* (to think^{Impf}) in the sentence *Ja dumaju, čto on prav* (I think^{Impf} that he is right) is a Stative, while in the sentence *Ja dumaju o rabote* (I am thinking^{Impf} **about** work) the verb is an Activity.

1.3.2.2 Activities

Activities in Russian refer to dynamism, and are compatible with duration, but not completion:

(1.18) *My eli moroženoe* (We ate/were eating^{Impf} ice cream)

(1.19) *On guljal po beregu* (He walked/was walking^{Impf} along the shore)

Activity verbs, therefore, are usually associated with the imperfective aspect. These verbs can take an NP (1.18) or locative (1.19) complement, but they can also take no complement (*Deti igrajut* – The children are playing^{Impf}).

Although activities are generally correlated with the imperfective, there is a special group of activity verbs that are perfective. These are called delimitatives or delimitives (Flier, 1985), and are one of the types of uni-aspectual verbs mentioned in section 2.3.1.3. Delimitives are verbs that indicate a dynamic atelic situation (an activity), but are assigned perfective grammatical aspect because there is an end point. In other words, these verbs are activities that have been “cut short”, and they are often formed by adding the prefix *po-*.¹¹ For example, one can add this prefix to the activity verb *igrat'* ‘to play’ to indicate limited duration: *poigrat'* ‘to play^{Perf} for a while’. Although these verbs express a final end point, this final end point is arbitrary and delimitives are thus more consistent with atelic verbs (Smith, 1997, p. 244).

¹¹ There are other delimitives that can indicate a limited duration that is longer than expected (as opposed to shorter than expected). These verbs normally have the prefix *pro-*, and the period of time is generally mentioned as well (Flier, 1985, p. 41). For example, *proiskali celyj den* ‘they searched^{Perf} all day’.

Additionally, delimitives generally do not involve a change of state or express an achieved outcome – the activity was simply done in a limited amount of time, and it is unknown whether a specific result was accomplished. For example, in the sentence *oni porabotali* ‘they worked^{Perf} for a little while,’ it is unclear whether what they were working on was completed (additional context would be needed to determine that). Unlike accomplishments, this group of perfective activity verbs does not focus on the results or consequences of the action, and is thus incompatible with completion.

1.3.2.3 Accomplishments

Accomplishments in Russian are compatible with dynamism, duration, non-detachability and completion, and can be either perfective or imperfective. They can also be transitive or intransitive, and must relate to specific “countable” situations (Smith, 1997, p. 245):

(1.20) *Ona vstala* (She arose^{Perf})

(1.21) *Ja s’ela pečenie* (I ate^{Perf} a cookie).

(1.22) *Ivan pisal pis’mo* (Ivan wrote/was writing^{Impf} a letter)

Both activities and accomplishments are compatible with duration, but the primary difference between the two is that accomplishments correspond with completion and involve an achieved outcome (examples 1.20-22).

Accomplishments and achievements are both compatible with completion, but differ in non-detachability. In other words, accomplishments expressing the perfective entail accomplishments expressing the imperfective. Expanding on example (1.21), *ja s’ela pečenie* ‘I ate^{Perf} a cookie’ entails *ja ela pečenie* ‘I ate/was eating^{Impf} a cookie.’ The completion of eating the cookie necessitates the process of eating the cookie. As a result, another difference between

accomplishments and achievements is that accomplishments are compatible with duration. In other words, with accomplishment verbs, a durative process leads up to the end result.

1.3.2.4 Achievements

Achievement verbs in Russian reflect dynamism, are incompatible with duration and non-detachability, but are compatible with expressions of completion. They can be transitive or intransitive, and are mostly associated with the perfective:

(1.23) *On našel ključ* (He found^{Perf} the key)

(1.24) *Ona slomala vazu* (She broke^{Perf} the vase)

(1.25) *Poezd prišel vovremja* (The train arrived^{Perf} on time)

Although many achievements are linked with the perfective, some of these verbs can have an imperfective form when focused on the beginning stages of an action. This means that the beginning part of an action could be an effort at completing the action (also called “conation,” Forsyth, 1970, p. 49). Some examples of conation in Russian are *sdavat’ èkzamen* ‘to take^{Impf} an exam’ – *sdal’ èkzamen* ‘to pass^{Perf} an exam’; *ugovarivat’* ‘to try to persuade^{Impf}, – *ugovorit’* ‘to persuade^{Perf} (succeed in persuading)’; *rešat’ problemu* ‘to attempt to solve^{Impf} the problem’ – *rešit’ problemu* ‘to solve^{Perf} the problem.’

Some imperfective achievements can have a habitual interpretation as well. For example: *on často terjal soznanie* ‘he would often lose^{Impf} consciousness’; *ona prihodila kogda xotela* ‘she came^{Impf} whenever she wanted^{Impf}’).

Based on the above description of lexical aspect in Russian, it is now necessary to discuss the application of Vendler's typology to the aspectual system in Russian, as well as establish what operational tests are appropriate in determining the lexical aspect types for Russian verbs.

1.3.3 Application of Vendlerian typology to Russian aspect

Several researchers have theoretically discussed and applied Vendler's classification to the Russian verbal aspectual system (i.e., Smith, 1997; Padučeva, 1996; Braginsky & Rothstein, 2008). In these analyses, Vendler's lexical aspectual categorization is seen as relevant in the application to the verbal system in Russian.

However, some issues have been raised by other researchers in applying the Vendlerian classification to Russian verbs. Timberlake (1985; 2004), for example, argues that although Vendler's typology can be applied to Russian, the "insights are modest" (2004, p. 411). He illustrates secondary imperfectives as a verb type that causes difficulty in classification. Secondary imperfectives are imperfective verbs that are formed from the perfective (see Figure 1 in section 2.3.1.3); in other words, the perfective is the base form, with the imperfective counterpart marked, usually with the suffix *-yva*. For example, the verb *zavjazyvat' šnurki* 'to tie up^{Impf} (shoe)laces' is the derived imperfective of *zavjazat'* 'to tie up^{Perf}'. Timberlake cites (2004, pp. 411-412) these verbs as problematic in the Vendlerian typology because like accomplishments, they assume some sort of end point, but like activities they do not reach that end point. Although this group of verbs appears to defy classification in Vendler's system, there is some pragmatic information crucial to the verbs' interpretation that makes them more compatible with accomplishments: although an end point is not reached, there is an assumption that an end point could have and perhaps should have been reached. And, in fact, it is quite

possible for these verbs to be used in the “statement of fact” function, where an end point may be reached, but the speaker does not use the perfective because s/he finds it unnecessary to focus on the end result of the action. Example (1.26) is an excerpt from a Russian native speaker’s written narrative produced for the present study:

(1.26) *Tam oni pereobulis’ v rolikovye kon’ki, i on načal katat’sja po vsemu ètažu*

There they changed^{Perf} into roller skates, and he began^{Perf} to skate^{Impf} around the entire floor

Poka ona zavjazывala šnurki, on nadel čěrnuju povjazku na glazu....

As she tied up^{Impf} her shoelaces, he put on^{Perf} a black blindfold....

In example (1.26) *zavjazывala* ‘she tied up^{Impf}’ is a secondary imperfective, and it is highly likely that the act of tying up the shoelaces was completed because the previous sentence indicates that the man and the woman had both already put on their roller skates, as the verb was in the perfective form (*oni pereobulis’ v* ‘they changed^{Perf} into’). The secondary imperfective in the following sentence is used for backgrounding purposes, for adding more information to the narrative, thereby making it unnecessary to use its perfective form, since it is already known from previous context that the action was completed.

Another type of verb in Russian that has been proposed as problematic in Vendler’s classification system is delimitive (or delimitative) verbs (Flier, 1985), which have already been mentioned in section 1.3.2.2. To reiterate, delimitives are verbs that indicate a dynamic atelic situation (an activity), but are assigned perfective grammatical aspect because there is an end point. It is possible to consider these verbs as activities that have been “cut short.” As Flier (1985, p. 52) notes, these verbs are difficult to place in one Vendlerian class: although these verbs indicate a limit and contain a perfective morphological marker, they are not compatible

with accomplishments because there is no process leading up to an end state (as there is in *napisat' pis'mo* 'to write^{Perf} a letter'), nor are they compatible with achievements because they do not reflect an instantaneous event or abrupt change of state (as there is in *razbit' steklo* 'to break^{Perf} the glass'). Although it can be problematic to consider these verbs activities, delimitives, like other activities, have an arbitrary rather than necessary end point, and for the purposes of the present study these verbs will be considered a sub classification of activities, and designated as Bounded Activities, a term proposed in Braginsky & Rothstein (2008, p. 49). Even though an end point is present in these verbs, no goal or change of state is assumed, and it is unknown whether a goal has been reached – the end point is arbitrary and simply indicates that the activity has stopped after a certain period of time.

Although these two types of verbs (secondary imperfectives and delimitatives) prove difficult to classify within a Vendlerian system, operational tests for lexical aspect can be developed for Russian, and can be used to compare how patterns of L2 acquisition of Russian aspect correspond with those of other target languages. The next subsection outlines these tests.

1.3.4 Operational tests for lexical aspect in Russian

Because the intent of the present study is to investigate how the L2 acquisition of Russian aspect fits within the context of aspectual acquisition in other target languages, a number of sources were consulted to develop operational tests that have been used in previous studies and yet are applicable to Russian: Shirai (1991, pp. 65-67, English), Robison (1995, pp. 223-224, English), Weist et al. (1984, p. 352, Polish), Smith (1997, pp. 242-261, Russian) and Braginsky & Rothstein (2008, pp. 23-52, Russian). There are a number of different tests proposed in these studies, but only certain ones were chosen for the present study. Those chosen were tests that

worked best in the classification of tokens during a pilot study (Martelle, 2010) and during the beginning phases of classifying tokens in the present study.

1.3.4.1 Test for states

According to Smith's (1997) temporal features, the primary distinction between states and activities is that states are incompatible with dynamism (or agency), while activities, on the other hand, are compatible. However, developing an operational test for lexical aspect based on agency can be problematic, because it is often mistaken as an aspectual value (Shirai, 1991, p. 70). Therefore, the present study will use a similar test for stativity proposed in Shirai (1991), one that concerns aspect rather than agency:

- Can the verb in the present tense (imperfective) indicate a habitual meaning?

The next necessary step is to define what exactly is meant by the term habitual. Comrie (1976, pp. 27-30) distinguishes the terms iterativity, which refers to the repetition of a particular situation, and habitual, which describes “a situation which is characteristic of an extended period of time” (pp. 27-28). However, Bybee (1985) makes a further distinction between iterativity and habituality, which was adopted in Shirai (1991, pp. 75-76), and will be used as the working definition in the present study: iterativity refers to repeated actions during a single occasion, while habituality indicates repetition on different, separate occasions that continue over an extended period of time. Depending on context, some iterative verbs can also indicate habituality. Examples illustrating this distinction follow:

(1.27) *Ja zavtrakala každoe utro v vosem' časov* (I ate^{Impf} breakfast every morning at eight o'clock – Habitual).

(1.28) *Oni dolgo čixali* (They sneezed^{Impf} for a long while – Iterative).

(1.29) *On sil'no kašljajl nočami* (He severely coughed^{Impf} during the nights – Habitual and Iterative).

The operational test for statives asks whether the imperfective present tense of the verb¹² can indicate a habitual meaning, that is, whether a verb can indicate a repeated action on separate occasions that extend over a prolonged period of time. One possible way this can be determined is to have the verb or verb phrase be accompanied with a prepositional or adverbial phrase expressing habituality. Examples of such phrases might include *každyj den'* 'every day'; *eženedel'no* 'weekly'; *po subbotam* 'on Saturdays'. In examples (1.30-31) the verbs in boldface indicate those that test as statives, while (1.32-33) are considered non-states:

(1.30) **Ja každyj den' ljublju russkij jazyk* (*I **love** Russian every day – State)

(1.31) **On umeet gotovit' po vtornikam* (*He **knows how** to cook on Tuesdays – State)

(1.32) *My igraem v basketbol každyju subbotu* (We **play** basketball every Saturday – Non-state)

(1.33) *Ona gotovit užin po vtornikam* (She **cooks** dinner on Tuesdays – Non-state)

If the imperfective present tense of the verb is compatible with habituality (as in 1.32-33), then it must be tested as a possible activity, accomplishment or achievement.

1.3.4.2 Tests for activities

Two operational tests were chosen in order to differentiate between activities and accomplishments/achievements, and are related to the distinction of duration versus completion. The first test has been used in several studies (Shirai, 1991, p. 66; Robison, 1995, p. 223; Weist et al., 1984, p. 352):

¹² The present tense only is used for the stativity test, as verbs with perfective markers are incompatible with states.

- If the subject is in the process of X, and the subject stopped in the middle of doing X, has X (with no iterative or habitual interpretation) taken place?

In other words, if a situation requires completion (accomplishment or achievement), and the subject or agent stopped mid-process, then that situation has not taken place. However, if it can be said that the situation has taken place, even after the subject has stopped, then that situation should be identified as an activity. For example:

(1.34) *On perestal spat'* (He stopped^{Perf} sleeping^{Impf})

(1.35) *Oni perestali igrat'* (They stopped^{Perf} playing^{Impf})

In examples (1.34-35), it can be said that the situations of sleeping and playing have taken place, despite the situations stopping midway. Examples (1.36-38) show situations that have not taken place as a result of the cessation, or have taken place with an iterative or habitual interpretation:

(1.36) *Perestali stroit' gorod* (They stopped^{Perf} building^{Impf} the city/the city stopped being built)

(1.37) *Ona perestala kašljat'* (She stopped^{Perf} coughing^{Impf})

(1.38) *On perestal prixodit' ko mne* (He stopped^{Perf} coming^{Impf} (over) to my place)

In example (1.36), by stopping the situation mid-process, it cannot be said that the construction of the city has taken place because the city is not completely built. Example (1.37) indicates a verb with an iterative interpretation (repeated actions of coughing during a single occasion), while example (1.38) is an illustration of a habitual situation (repeated actions of coming over to my place over an extended period of time), and thus would not fall under the classification of activities.

The application of this test also raises the issue of verbs belonging to more than one lexical aspect class, as seen in examples (1.39-40):

(1.39) *Ona perestala pet'* (She stopped^{Perf} singing^{Impf})

(1.40) *Ona perestala pet' pesnju* (She stopped^{Perf} singing^{Impf} the song)

In example (1.39), even though the subject stopped singing, it is possible to interpret that the act of singing has taken place. Example (1.40) however, shows that with the addition of a direct object (*pesnju* '(the) song'), the entire action of singing the song has not taken place. Therefore, *pet'* 'sing' in example (1.39) is considered an activity, while *pet'* in example (1.40) is a non-activity. These examples are an illustration as to why, during the coding of the data, it is crucial to code the entire verb phrase within its surrounding context, and not the verb in isolation.

The second test for activities, used in Braginsky & Rothstein (2008, pp. 23-39) and mentioned in Smith (1997, p. 243), incorporates the adverb *postepenno* 'gradually':

- Can the verb be modified by the incremental qualifier *postepenno* 'gradually'?

In addition to using the adverb *postepenno*, Braginsky & Rothstein (2008, pp. 40-47) also use the incremental modifier *X za X* 'X by X' (phrases like 'step by step,' 'page by page,' 'minute by minute,' 'one by one,' etc.) to determine the distinction between activities and telic situations (especially accomplishments). They argue that *postepenno* in Russian never modifies an activity (or state, for that matter) and is naturally compatible with accomplishments (p. 24). For example:¹³

(1.41) **Deti postepenno bežali* (The children gradually ran^{Impf}) (p. 25)

(1.42) *Deti postepenno ubystrjali svoj beg* (The children gradually quickened^{Impf} the run)
(p. 25)

¹³ All examples with *postepenno* and other incremental modifiers are taken from Braginsky & Rothstein (2008).

(1.43) **Ivan postepenno ljubil Mašu* (Ivan gradually loved^{Impf} Masha) (p. 25)

(1.44) *Ivan postepenno vse bol'she i bo'lše vljubljal'sja v Mašu* (Ivan gradually fell^{Impf} more and more in love with Masha) (p.25)

Example (1.41) shows how an activity verb is incompatible with *postepenno*. In English, it is possible to use the word *gradually* to modify states and activities, but only when they are accompanied by a scale of measurement (Braginsky & Rothstein, 2008, p. 24). In relation to examples (1.41-42), it is possible in English to say 'the children gradually ran more and more quickly' (p. 24), with 'more and more' as a scale of measurement. The Russian equivalent of this sentence is not grammatical (**Deti postepenno bežali vse bystree i bystree*); rather, Russian uses an accomplishment (*ubystrijat'* 'to quicken^{Impf}') to express the meaning of an activity accompanied by a scale of measurement.

Example (1.43) is an illustration of the incompatibility of *postepenno* with a state (*ljubit'* 'to love^{Impf}'). Again, in English, with states it is possible to use this incremental adverb, as long as it is accompanied by a scalar modifier: 'Ivan gradually loved Masha more and more' (p. 24). And again, example (1.44) shows how the distribution of the English *gradually* does not directly transfer over to the Russian *postepenno*: the inchoative achievement *vljubljat'sja* 'to fall in love^{Impf}', is used to adequately express this meaning.

Postepenno can modify accomplishments both in the imperfective and the perfective (Braginsky & Rothstein, 2008, p. 36); some achievements can also take this modifier, as long as the verb reflects a non-unitary action that expresses iterativity over an extended period of time:

(1.45) *Vozdušnye šariki postepenno lopnuli odin za drugim* (The balloons gradually popped^{Perf} one by one) (p. 26)

The *postepenno* test is particularly useful in categorizing delimitatives (bounded activities) – the group of verbs previously discussed in section 1.3.2.2 – as activities within the Vendlerian system. Braginsky & Rothstein (2008, p. 51) argue the following:

“....delimited activities are not a new Vendlerian class, but a class of verb which results from the interaction of the lexical semantics of activities, the semantics of the prefix, and the semantics of the perfective aspect. ...we see that *guljat*^{Impf} and *poguljat*^{Perf} should both be classified as activities, since they both denote sets of events which are dynamic and do not involve change. However, the perfective aspect imposes a boundedness on the perfective predicate *poguljat*^{Perf}. This correctly predicates that *poguljat*^{Perf} does not behave as an accomplishment, since it does not acquire incremental structure, and indeed it cannot be modified by *postepenno*.”

Therefore, these verbs, because they are incompatible with *postepenno*, are best regarded as activities, rather than accomplishments:

(1.46) **Ivan postepenno poguljal* (Ivan gradually walked^{Perf} for a while) (p. 52)

Both of the tests described in this section can be used to distinguish activities from non-activities. If we answer yes to the first test (If the subject is in the process of X and stops in the middle of doing X, has X (with no iterative or habitual interpretation) taken place?), then the verb is an activity. If we answer no (or if the first test is not applicable to the verb phrase), then we move to the second test (Can the verb be modified by the incremental qualifier *postepenno* ‘gradually’?). If we answer no, the verb is an activity. If we answer yes, the verb must then be tested to determine if it is an accomplishment or achievement.

1.3.4.3 Tests for accomplishments/achievements

The main difference between accomplishments and achievements is that accomplishments involve duration leading up to a result or change of state (achievements have no duration), and as a result, accomplishments are compatible with the concept of non-detachability; that is,

accomplishments expressing the perfective entail accomplishments that express the imperfective. This study uses three tests to distinguish accomplishments and achievements.

The first test (Robison, 1995, p. 224) proved to be one of the more reliable and effective tests for distinguishing accomplishments and achievements in Russian. This test reflects the durative distinction between the two lexical types:

- When modified by a *v* (where *v* = ‘at’) time phrase, does the predicate have a perfective meaning? Is the entire event conceived as having happened at the given time?

Examples (1.47-48) below illustrate this difference.

(1.47) *V 9.00 on rešil* (At 9:00 he decided^{Perf})

(1.48) *V 9.00 on napisal pis'mo* (At 9:00 he wrote^{Perf} a letter)

In example (1.47), the entire event of deciding can be conceived as having happened at the given time, but in example (1.48), only finishing the letter occurred at the given time – the entire event of writing and finishing the letter did not occur at 9:00. Because the entire situation in example (1.47) can be conceived as happening in a *v* ‘at’ time phrase, it is more of a punctual action, incompatible with duration, and is thus considered an achievement. When using this test, if we can answer that the entire situation happened at the given time, the verb or verb phrase can be classified as an achievement. If the answer to this test is ‘no,’ or if it is not certain, there are two more tests that can be used to distinguish achievements from accomplishments.

The second test, used in Weist et al. (1984, p. 352), is related to the first activity test, and involves stopping in the middle of an action:

- As a complement of *perestat* ‘stop’, does the imperfective form have an iterative or habitual interpretation only? In other words, can the imperfective form be applied only to situations involving repeated actions?

Examples (1.49-52) below are illustrations of verbs that can apply only to repeated actions:

(1.49) *On perestal zamečat’ vremena goda* (He stopped^{Perf} noticing^{Impf} the seasons)

(1.50) *Perestali ubivat’* (They stopped^{Perf} killing^{Impf})

(1.51) *Ona perestala prixodit’ na rabotu* (She stopped^{Perf} coming^{Impf} to work)

(1.52) *Ljaguška perestala prygat’* (The frog stopped^{Perf} jumping^{Impf})

With these verbs, we can answer yes to the second test. They apply only to repeated situations – examples (1.49-51) involve habituality, while example (1.52) has an iterative interpretation. As a result, these verbs can be considered achievements. If the answer is no to the second test, the verb is more likely an accomplishment:

(1.53) *My perestali pet’ pesnju* (We stopped^{Perf} singing^{Impf} the song)

(1.54) *Ona perestala pit’ sok* (She stopped^{Perf} drinking^{Impf} the juice)

(1.55) *On perestal čitat’ pis’mo* (He stopped^{Perf} reading^{Impf} the letter)

Examples (1.53-55) show verbs that do not necessarily entail iterativity or habituality – they can indicate a unitary action, while examples (1.49-51), on the other hand, cannot refer to a single, unitary action.

The third and final test for achievements/accomplishments involves non-detachability, and the concept of entailment. It is described in Smith (1997, p. 43) and was used in Shirai (1991, p. 76):

- If subject did X (perfective) in a specific time period, does this mean that the subject was doing X (imperfective) throughout/during that time period?

If yes, then the verb is an accomplishment. In example (1.56), (1.56a) entails (1.56b), that is, if he ate a cake in an hour, then it means that he was eating that cake for an hour:

- (1.56) a. *On s'el tort za čas* (He ate^{Perf} the cake in an hour)
 b. *On el tort čas* (He ate/was eating^{Impf} the cake for an hour)

If the answer to this test is no, or if the grammaticality of using a verb in this sense is questionable, then the verb is an achievement:

- (1.57) a. *On našel ključ za nekol'ko minut* (He found^{Perf} the key in a few minutes)
 b. **On naxodil ključ nekol'ko minut* (He found/was finding^{Impf} the key for a few minutes)

The use of the verb in (1.57b) is an example of ungrammaticality when applying this test – rather than using the imperfective form of the verb ‘find,’ it is more fitting to use the activity verb *iskati* ‘to search/look for^{Impf},’ in this situation instead. *Najti* ‘to find^{Perf},’ and its imperfective counterpart *naxoditi* ‘to find^{Impf},’ as this test shows, are both incompatible with duration and non-detachability, and are thus considered achievement verbs.

The following section summarizes the above operational tests by outlining the procedures for classifying verbs according to lexical aspect type.

1.3.4.4 Procedures for classification

The very first step in classification was to isolate each lexical verb produced in the past tense and categorize it as imperfective or perfective. The next step was to read the entire utterance (and other surrounding discourse when necessary) to reasonably determine the interpretation of the

verb phrase within a pragmatic context. After this was done, the tests described in 1.3.4.1-1.3.4.3 were applied to each verb. A specific step-by-step procedure follows below, and takes the same format that is outlined in Shirai (1991, pp. 65-67).

Step 1. State vs. non-state

Can the verb in the present tense (imperfective) indicate a habitual meaning?

NO \Rightarrow State (*Ja ljublju russkij jazyk* ‘I love^{Impf} Russian’)

YES \Rightarrow Non-state (*Ja rabotaju* ‘I work^{Impf}’) ----- Go to Step 2

Step 2. Activity vs. non-activity

a) If the subject is in the process of X, and the subject stopped in the middle of doing X, has X (with no iterative or habitual interpretation) taken place?

YES \Rightarrow Activity (*spat* ‘sleep^{Impf}’; *rabotat* ‘work^{Impf}’; *pet* ‘sing^{Impf}’)

If NO can be clearly determined (*pet pesnju* ‘sing^{Impf} a song’; *najti sumku*

‘find^{Perf} the purse’) \Rightarrow non-activity ----- Go to step 3

If N/A or unclear (*porabotat* ‘work^{Perf} for a little while’) \Rightarrow apply test b

b) Can the verb be modified by the incremental qualifier *postепенно* ‘gradually’?

NO \Rightarrow Activity (*porabotat* ‘work^{Perf} for a little while’)

YES \Rightarrow Non-activity ----- Go to step 3

Step 3. Accomplishment vs. Achievement

a) When modified by a *v* (where *v* = ‘at’) time phrase, does the predicate have a perfective meaning? Is the entire event conceived as having happened at the given time?

YES \Rightarrow Achievement (*prijti* ‘arrive^{Perf}’; *pojti* ‘set off^{Perf}’; *prygnut* ‘jump

(once)^{Perf}; *umirat/umeret* ‘die^{Impf/Perf}’)

If NO or unclear (*pisat' pis'mo* 'write^{Impf} a letter'; *prygat'* 'jump^{Impf}') ⇒ apply

test b

b) As a complement of *perestat'* 'stop', does the imperfective form have an iterative or habitual interpretation only? In other words, can the imperfective form be applied only to situations involving repeated actions?

YES ⇒ Achievement (*prygat'* 'jump^{Impf}'; *prixodit'* 'arrive^{Impf}')

NO ⇒ Accomplishment (*pisat' pis'mo* 'write^{Impf} a letter')

If still unclear ⇒ apply test c

c) If subject did X (perfective) in a specific time period, does this mean that the subject was doing X (imperfective) throughout/during that time period?

YES ⇒ Accomplishment (*On s''el tort* 'he ate^{Perf} the cake')

NO ⇒ Achievement (*On našël tort* 'he found^{Perf} the cake')

Although these tests were very effective in the classification of the majority of Russian verbs, there were some problematic cases. The following section describes two specific problem verbs, and how their difficulty in classification was resolved.

1.3.4.5 Problematic verbs in the classification of lexical aspect

There were two verbs in particular that in certain ways proved difficult to place in one of Vendler's lexical aspect categories. They are: *skazat' X* 'to say^{Perf} X'; and *idti v/na X* 'to go^{Impf} to X'.

Skazat' X 'to say^{Perf} X'

The past tense form of this verb (*skazal/-a* ‘s/he said^{Perf}’) occurred frequently in the data and like its English counterpart,¹⁴ this verb raises some interesting theoretical questions regarding placement in a specific lexical aspect class. The following discussion involves the classification of *skazat’* based on the three tests distinguishing accomplishments from achievements.

Test (a) asks: when modified by a *v* ‘at’ time phrase, does the predicate have a perfective meaning? Is the entire event conceived as having happened at the given time? With the verb *skazat’* the answer to this question is not entirely clear, because it can depend on the length of the utterance being said. While it is theoretically possible (though rather unnatural) to say *V pjat’ časov on skazal: “Stoj!”* (At five o’clock he said^{Perf}: “Stop!”), it is conceivable that the entire situation of saying the utterance “stop!” happened at the given time because the utterance itself is instantaneous. However, if one were to say *X*, and it took several minutes to say *X*, then it cannot be said that the entire event of saying *X* happened during a *v* ‘at’ time phrase.

Continuing with test (b): as a complement of *perestat’* ‘stop’, does the imperfective form have an iterative or habitual interpretation only? In other words, can the imperfective form be applied only to situations involving repeated actions? In the application of this test, we can answer yes to the overwhelming majority of cases in the data: by saying *on perestal govorit’ “stoj”* (he stopped^{Perf} saying^{Impf} “stop”) or *perestal govorit’ pravdu* (he stopped^{Perf} speaking^{Impf} the truth), the most likely interpretation is that of habituality. However, in some instances, it is also possible to interpret *perestal govorit’* as a situation involving a unitary action. For example:¹⁵

¹⁴ For a detailed discussion of coding the verb *say* in English, see Shirai (1991, pp. 80-82).

¹⁵ This example is from the Russian National Corpus: <http://ruscorpora.ru>.

(1.58) *Ona skazala “ox ty” i perestala govorit’, a ee muž sprosila....*

She said^{Perf} “oh you” and stopped^{Perf} speaking^{Impf}, and her husband
asked^{Perf}....

In example (1.58) *perestala govorit’* (stopped speaking) cannot be interpreted as habitual, and thus refers to a unitary action – this example shows a sequence of events, prefaced and followed by verbs expressing completion, where the speaker first said “oh you” and then stopped speaking, after which her husband asked a question. Because tests (a) and (b) do not provide a reliably clear-cut interpretation, it is necessary to apply test (c).

In test (c) we ask: If subject did X (perfective) in a specific time period, does this mean that the subject was doing X (imperfective) throughout/during that time period? In Russian, durative time phrases like *za čas* (in an hour) or *za dve minuty* (in two minutes) are not compatible with the verb *skazat’*: **Za dve minuty on skazal X* (In two minutes he said^{Perf} X). Therefore, this test does not apply to the verb phrase *skazat’ X*.

Tests (a), (b) and (c) by themselves do not offer a clear answer of whether this verb should be classified as an accomplishment or achievement. And even with taking all three tests into account, the interpretation of this verb is still not quite as apparent as one would prefer, although with the application of these tests one would be more inclined towards classifying this verb as an achievement:

(1) It is theoretically possible (although perhaps not very natural) to use a *v* ‘at’ time phrase to indicate the entire situation as happening at the given time;

(2) The imperfective form (*govorit’ X*) tends to indicate a habitual interpretation when acting as a complement to *perestat’* (to stop); and

(3) The verb phrase *skazat' X* (say^{Perf} X) is overall incompatible with durative time phrases like *za čas* (in an hour), which is more consistent with achievements than accomplishments.

Therefore, the verb phrase *skazat' X* in this study was coded as an achievement. The English equivalent *say X* was also classified an achievement in Shirai (1991) because "...when we say "say X" we rarely refer to its duration. Rather, we reduce it to a single point." (p. 80). This is the case for Russian as well: in a conversation I had with a native Russian speaker, I asked for her intuition on whether it was possible to say *skazat' X za minutu* (say^{Perf} X in a minute). She had answered that phrases like 'in a minute' were not really compatible with the verb, because *skazat'* has more of an "instantaneous feel" to it.

***Idti v/na X* 'to go/walk^{Impf} to X'**

Idti also appeared frequently in the data and is an extremely nebulous verb in Russian – it has multiple interpretations and uses, and can fall into numerous lexical classes, depending on the context in which it is used. For example, this verb can be a state, with the meaning 'to suit' or 'become':

(1.59) *èto plat'e tebe idët* (That dress suits/becomes^{Impf} you)

When used with nouns of precipitation (having the literal gloss of 'to go rain' or 'to go snow') *idti* falls under the category of an activity:

(1.60) *V Moskve šël sneg* (It snowed/was snowing^{Impf} in Moscow)

The particular meaning that I want to focus on in this section is the more prototypical meaning, and the one that L2 learners first learn when they are introduced to this verb: *idti v/na X* 'to go/walk to X'. *Idti* is a unidirectional verb of motion, meaning that the subject or agent

goes from point A to point B by means of walking.¹⁶ Mahota (1996) describes this type of verb as a “snapshot of an action in progress, as motion from point A to point B which is not completed, but which usually has a stated goal” (p. 7). This verb, therefore, in many ways resembles secondary imperfectives (described in section 1.3.3) in a semantic sense: *idti v/na* ‘to go^{Impf} to’ states an end point, but that end point is either not reached, not known whether it is reached, or it is irrelevant to the speaker whether or not it was reached.

From a pragmatic standpoint, this verb phrase cannot be used in isolation in the past tense, which is a mistake that the L2 learners (especially those in the beginning and intermediate levels) in the present study made with some frequency. To say *on šel v magazin* ‘he walked/was walking^{Impf} to the store’ without any additional context would not be an acceptable utterance because a native Russian speaker would likely be waiting to hear what happened as he was walking to the store. As a result, this verb phrase is often accompanied by a *kogda* ‘when’ clause in the past tense (Mahota, 1996, p. 10) to provide additional context, and is often given a progressive aspect interpretation when translated into English:

(1.61) *Kogda šla na rabotu, pošel sneg.*

When/as she was walking^{Impf} to work, it started snowing^{Perf}

In terms of classifying this verb phrase into one of Vendler’s categories, it must undergo the three tests that distinguish accomplishments and achievements because it fails the activity tests. Regarding test (a), the predicate cannot have a perfective meaning and cannot be conceived as having happened during an ‘at’ time phrase, as the verb itself is imperfective (with

¹⁶ There are other unidirectional verbs, which differ in the manner by which one is going; for example, going by means of a wheeled vehicle (*exat’*), going by means of flying (*letet’*), going by boat or swimming (*plyt’*), and running (*bežat’*).

no perfective counterpart ¹⁷) and cannot indicate a perfective meaning. This would indicate that the verb phrase might be more consistent with having accomplishment characteristics, so it is necessary to apply the remaining two tests.

In the application of test (b), the verb phrase *idti v/na X* ‘to go^{Impf} to X’ cannot be a complement to *perestat* ‘to stop’: the sentence **on perestal idti na rabotu* ‘he stopped^{Perf} going/walking^{Impf} to work’ is ungrammatical to native Russian speakers. In a sense, test (b) need not be applied at all because saying *on šel na rabotu* ‘he was going/walking to work’ means that somehow or for some reason the act of getting to point B was not achieved. Because test (b) is not applicable, test (c) must then be used.

However, test (c) is inapplicable as well, because, as mentioned above, there is no direct perfective counterpart to this verb phrase, and it cannot be said that if the subject did X (perfective) in a particular time period, then the subject was doing X (imperfective) throughout that time period. However, it is possible to use certain durative time phrases like *dva časa* (for two hours), *tri dnja* (for three days) or *dolgo* (for a long time) with this verb phrase¹⁸: *Ja pomnju, kak dolgo my plyli v Evropu* ‘I remember, how for such a long time we sailed^{Impf} to Europe (in the sense of how long it took to get to Europe)’. Because it is possible to use durative phrases with this verb, and because the verb phrase cannot have a perfective meaning when modified by a *v* ‘at’ time phrase, this verb phrase type was classified as an accomplishment.

In the remaining sections of this background chapter, I will outline and analyze the few studies that have explored how Russian aspect is acquired, and will then conclude with an

¹⁷ A number of prefixes can be added to *idti* to indicate perfectivity; however, these verb forms become new lexical items: for example, *pojti* ‘to set off^{Perf}’, *najti* ‘to find^{Perf}’, *prijti* ‘to arrive^{Perf}’, among others.

¹⁸ Although *idti v/na X* can be accompanied by these durative phrases, it is much more common to use phrases of duration when the verb is not followed by *v/na* ‘to’.

analysis of background studies involving multiple factors that will be taken into account when testing the AH.

1.3.5 Acquisition of Russian aspect

1.3.5.1 L1 acquisition

Most studies involving the acquisition of Russian aspect are L1 acquisition studies, and although many of these studies do not directly test the AH, the results of these studies suggest that children seem to take lexical aspect into account when applying tense-aspect markers (e.g. Stoll, 1998; 2005; Bar-Shalom, 2002; Kazanina & Phillips, 2003; Gagarina, 2004).

The purpose of Stoll (1998) was to determine the nature of the understanding of aspectual forms among native Russian-speaking children (of preschool age). Stoll (1998) categorized the verbs into several classes of Aktionsarten¹⁹, rather than Vendler's lexical aspect categories. The Aktionsarten used in this study are duratives (roughly equivalent to states and activities), ingressives (i.e., 'to start X', a type of achievement), delimitatives (a type of activity), semelfactives (a type of achievement) and telics (accomplishments and some achievements). In this study one hundred 2- to 6-year-old children participated in a comprehension test that involved video stimuli. The children watched a video that contained several frames, one showing a puppet acting in (or acting out) a situation that requires the perfective (such as reading a book in its entirety then closing the book), and another showing a different puppet acting out a situation that would require the imperfective (such as reading a book without finishing it). After watching the videos, the children answered questions about which puppet completed the action,

¹⁹ Stoll defines the term Aktionsart as a term that "applies to the lexical temporal semantics of verbs" (p. 353).

and which did not. After analyzing the children's responses, Stoll determined that Aktionsart is the primary factor in how children develop and understand the aspectual system in Russian. This was especially evident for the youngest children, whose incorrect answers showed a strong correlation with Aktionsart, indicating that children use Aktionsart when making a decision. Additionally, the results show that children in all of the age groups seemed to have a better understanding of the telic Aktionsart (p. 372), the verbs of which were in the perfective. This is consistent with the AH, in that the children show a sensitivity to the inherent semantic characteristics in their understanding of various verbs, and that telic verbs in the perfective past tense seem to be more accessible in the earlier stages of acquisition.

Besides Stoll's (1998) study involving the comprehension of aspectual forms, there have also been production studies supportive of the AH, which have examined how children learn and produce Russian aspect. For example, the primary aim in Bar-Shalom (2002) was to address how accurate children are when producing tense and aspect, how early children produce the imperfective and perfective, and whether their aspectual use is restricted in any way to particular types of lexical aspect (i.e., whether children use the perfective only with achievements). The primary method of this study was naturalistic observations²⁰ of four monolingual Russian children (1;6 – 2;11), and based on these observations, Bar-Shalom (2002) made the following conclusions:

- (1) Both the perfective and imperfective were used by all of the children in their early productions of the past tense, but the children used the perfective much more than the

²⁰ Three of these children were videotaped in weekly sessions for 30 minutes (two in Russia, one in the United States), but the article did not clearly state over what period of time these videotaped sessions were conducted. Essentially, it is unclear whether all of these children were videotaped from the time they were 1;6 to 2;11, or whether data was recorded at certain intervals between these ages. Data from the fourth child (over a period of at least four months) was taken from the CHILDES database.

imperfective. However, the oldest children used the highest percentage of the imperfective in the past tense (p. 334), suggesting that the perfective is acquired before the imperfective.

(2) The children made very few aspectual errors when referring to an event in the past or future, but the very few errors that were made were morphological in nature and involved novel verb forms, involving an incorrect prefix choice with the perfective (p. 336).

(3) The earliest past tense utterances were achievements (p. 335), which is consistent with what the AH predicts.

In a second production study (Gagarina, 2004), there seems to be even stronger evidence for the AH. In this study, the speech of 4 monolingual Russian children²¹ was analyzed to address the question of how children acquire aspectual pairs. The results indicate that in the past tense, the children primarily used the perfective; moreover, the choice of the perfective and imperfective aspects is clearly dependent on the inherent semantic characteristics of the verbs (p. 52). Gagarina therefore concludes that because lexical meaning and aspect are interconnected, lexical meaning is a crucial part of learning aspect.

The three studies outlined above (Stoll, 1998; Bar-Shalom, 2002; Gagarina, 2004), show support of the AH to varying degrees. To begin with, Bar-Shalom's and Gagarina's studies looked at the children's production of aspect at a very early age and found that the perfective appears to be acquired before the imperfective, which is consistent with the AH. Additionally, Stoll (1998) examined children's comprehension of aspectual forms, and found that telic verbs in the perfective past tense seem to be more accessible in the earlier stages of acquisition, which is also consistent with the AH. What is not entirely clear from these studies however, is the degree

²¹ These children's speech was periodically recorded from the onset of speech until about the age of three.

to which the other predictions of the AH is supported (i.e., whether learners begin to mark state and activity verbs with the imperfective, then extend the use of the imperfective to achievement and accomplishment verbs).

1.3.5.2 Heritage learners

Besides L1 studies, there has been some research examining aspectual usage among heritage learners of Russian (e.g., Pereltsvaig, 2005; Polinsky, 2008). A heritage learner can be defined as a speaker who grew up learning (or maybe only hearing) one particular language but then later (generally before adolescence) switched to another language that became primary and/or dominant.²² An interesting finding from these studies is that heritage speakers appear to lose grammatical aspect. In other words, these speakers do not produce aspectual pairs with regularity: they tend to use one member of the pair and lexicalize that verb as either imperfective or perfective. What is interesting is that the verbs that are lexicalized as perfective tend to be accomplishments and achievements, while those that are lexicalized as imperfective tend to be states and activities (Polinsky, 2007, p. 163). Polinsky (2008, p. 276) further concludes: “if only one verb is maintained in heritage Russian, then it represents the member of the aspectual pair that denotes the more common conceptualization associated with the activity designated by the verb.” This is consistent with the Prototype Hypothesis suggested by Shirai & Andersen (1995), and is offered as one potential explanation for such tendencies in heritage learner speech (Pereltsvaig, 2005, p. 20). Pereltsvaig (2005) further argues that heritage speakers use verbal morphology (the perfective or imperfective) to encode lexical aspect (especially telicity, or what

²² However, it is important to stress that heritage speakers should not be considered a homogenous group; rather, the heritage speaker population can be considered heterogeneous in several ways based on sociolinguistic factors, as well as level of proficiency in the baseline language (Polinsky, 2008, pp. 265-266).

Pereltsvaig terms Bounded Path), and proposes that the AH can account for the great majority of verb forms produced by heritage learners (p. 16). The results of these studies thus suggest that what is predicted by the AH also applies to the speech of heritage learners.

1.3.5.3 L2 acquisition

Overall, very few studies have been conducted on the L2 acquisition of Russian aspect, but the few that have been done seem to show some compatibility with the AH. For example, two non-production studies (Slabakova, 2005; Nossalik, 2008) investigated the L2 acquisition of grammatical aspect, and although these studies did not specifically test the AH, they found that L2 learners generally understand that verbs with perfective markers are compatible with telic situations. For example, Nossalik's (2008) study involved a grammaticality judgment task, in which learners for the most part demonstrated an understanding that the perfective is incompatible with durative verbs. Additionally, Slabakova (2005) incorporated a cloze-type interpretation task, where participants read a sentence denoting a particular situation, and then chose from among three different interpretations that made sense in relation to the sentence they just read. One of the conclusions from this study is that L2 learners at all levels seemed to understand that verbs with a perfective marker (a prefix) indicate telicity, in other words, the learners understood that a perfective-marked verb was more compatible with telic verbs (accomplishments and achievements). The results of these studies therefore, show initial support of one of the associative predictions of the AH (that perfective markers appear more with telic verbs). However, the verbs primarily used in the tasks in both studies were primarily activities and accomplishments, and because very few (if any) achievements were included in the tasks, it is difficult to determine the extent to which these studies are supportive of the developmental

predictions of the AH. From these studies, it is unclear whether the perfective past is acquired before the imperfective past, and whether a prototypical association (telics with perfective, atelics with imperfective) extends to a more non-prototypical association (atelics with perfective, telics with imperfective).

One study (Leary, 2000), however, specifically tested and found support for the AH with L2 Russian learners. There were 40 participants in this study at varying levels of proficiency (Levels 1-4, with each level corresponding to year of study), and the data involved the production of aspectual forms – the participants were asked to provide a written narrative after watching a silent film clip from the movie *Modern Times*. The results of Leary's experiment support the AH, in that the learners' choice in using grammatical aspect was influenced by the lexical aspect of the verb: the participants tended to use the imperfective with states, whereas achievements and accomplishments were marked with the perfective. Overall, the results of Leary's study suggest that Level 2-4 learners (that is, for learners in their second through fourth year of study) choose the imperfective or perfective form based on the verb's lexical aspectual class. Another result of this study was that the Level 1 learners overall showed little grasp of the past tense: these learners produced a total of ten verbs, not one of which was in the past tense. Because there were only three Level 1 participants in this study, it is difficult to make a generalization as to how lower-level learners of L2 Russian would assign the past tense, and whether they might initially use the imperfective as a default form until they gain more exposure with the perfective. This present study tests whether this indeed may be the case,²³ and the

²³ Besides having few Level 1 learners, there are two other methodological problems in Leary's study that should be mentioned. The first is that the learners in Leary's study were grouped according to year of study, as opposed using a proficiency test to group the learners (the author mentions that a test would have been more desirable; however, one was not available at the time). Had a proficiency test been available, it is possible that the study would have had more Beginning-Level learners. Additionally, the coding procedures for determining the lexical aspect of Russian

following section of this chapter will outline and analyze the several factors that will be taken into account in the present study.

1.4 MULTIPLE FACTORS INFLUENCING THE ACQUISITION OF ASPECT

Shirai (2004) outlines possible factors that could account for learners' sensitivity to lexical aspect when applying tense-aspect markers to verbs, as well as why the results of some studies (such as Salaberry, 1999) appear to deviate from the predictions of the AH. Three factors that will be examined in the present study are order of instruction, influence of the L1, and elicitation procedure and task type. To address these factors, this study will specifically manipulate the variable of task type; the variables of order of instruction and L1 influence will not be manipulated, but are rather hypothesized to be additional contributing factors that influence the acquisition of aspect based on the comparison of the present studies with prior research using similar data and L1 English learners.

1.4.1 Order of instruction

One factor that appears to be relevant in influencing the acquisition of aspect is pedagogical in nature, and this section presents how Russian aspect is introduced in an L2 classroom in order to

verbs were based entirely on the lexical aspect tests developed in Robison (1995). Robison's tests were developed to determine the lexical aspect of English verbs, and although some of these tests can be applied to Russian, several of them cannot; for example, two tests to distinguish a stative or a dynamic event are inapplicable to Russian (1995, p. 223); "Non-states are regularly used in the present progressive, states normally are not" and "Non-states can insert do-clefts, states cannot." Russian has neither the present progressive nor do-insertion, so neither of these tests can be used to classify Russian verbs. Thus, with the results of Leary's study being based on operational tests designed for English verbs, the study's conclusions can be called into question. To avoid these methodological problems, the present study uses a proficiency test and lexical aspect tests (outlined in 1.3.4) more applicable to Russian.

provide a possible explanation as to why L2 Russian learners may use the imperfective as a default form.

In order to form the past tense in Russian, learners are taught to drop the infinitive ending (-t'), and replace it with the suffix -l (or -la, -lo, -li, depending on the gender and number of the subject). For example:

(1) *Pisa-t'* (to write) \Rightarrow *pisa-l* (he was writing^{Impf})
 Write-INF write-PAST/Sing/Masc

When classroom learners are first introduced to the past tense and aspect in Russian, they generally learn the imperfective first, because verb instruction prior to the past tense primarily involves the present tense. And because there is no present perfective in Russian, the verbs that the learners know in the initial stages of language learning are mainly imperfective. Once learners are introduced to the concept of aspect, they learn that for verbs indicating a perfective meaning, in addition to the grammatical ending -l, a type of affix (often a derivational prefix²⁴) is usually added to the verb to show that it is perfective:

(2) *Pisa-t'* (to write) \Rightarrow *na-pisa-la* (she wrote^{Perf})
 Write-INF PERF-write-PAST/Sing/Fem

As a result, beginning-level learners generally learn the imperfective as the morphologically unmarked form, with the perfective often containing a grammatical marker like a prefix. The formation of secondary imperfectives (marked imperfectives) is generally not explicitly taught in

²⁴ Another perfectivizing affix is the suffix -nu, which can often portray a semelfactive meaning. In Russian, the semelfactive is considered a single, one-time act, the imperfective counterpart of which generally denotes a series of these acts (Forsyth, 1970, p. 26). For example, *prygat'* (to jump, up and down – imperfective) – *prygnut'* (to jump once – perfective); *stučat'* (to knock – imperfective) – *stuknut'* (to knock once – perfective). However, some verbs with the suffix -nu no longer carry a semelfactive meaning, but are simply the perfective counterpart to an imperfective verb (Forsyth, 1970, p. 27): for example, *ulybat'sja* (to smile – imperfective) – *ulybnut'sja* (to smile – perfective).

the first year of study (learners often encounter these verbs later in their language learning), and only certain, frequently used bi-aspectual verbs (like *ispol'zovat'* 'to use^{Impf/Perf}' and *ženit'sja* 'to marry (of a man)^{Impf/Perf}') and uni-aspectual verbs (mainly states) are introduced to beginning-level learners.

The following paragraphs will illustrate how certain textbooks introduce tense and aspect to beginning-level learners. Three of the most common language textbooks used in L2 Russian classrooms at American universities are *Live from Russia* (Lekic et al., 2008), *Golosa* (Robin et al., 1998) and *Nachalo* (Lubensky et al., 2001). The following outlines show how each textbook introduces verb conjugation, tense and aspect. The timeline used for indicating when a particular concept is introduced is based on an academic year-long (two-semester) learning program.

Live from Russia

- Introduces the concept of verb conjugation during Unit 2 (at about the end of the first month of study). Verb conjugation is in both the present and past tenses, and is distributed in the imperfective only, up to and through Unit 5.
- Aspect is introduced in the final unit (Unit 6), at the end of the first semester. First, the concept of aspect is described, with definitions given for the perfective (focus on result and completion) and the imperfective (repetition, process, statement of fact). The idea of aspectual pairs is also introduced, and examples are given in the past tense. No explicit instruction is given as to the morphological processes (such as prefixation) involved in distinguishing grammatical aspect. Most of the perfective counterparts are prefixed verbs.
- Aspect in the future tense is then introduced two days after learners become familiar with aspect in the past tense. Formation of the future imperfective (analytic construction) is

presented, followed by formation of the future perfective (perfective stem + present tense ending).

Golosa

- Chapter 3 introduces the concept of verb conjugation (roughly the end of the first month of study). Verb conjugation is in present tense only, hence, verbs are imperfective only.
- The past tense is introduced in Chapter 8 (towards the end of the first semester). The past tense marking only is introduced (no aspect markings); therefore, the past tense of only the imperfective is presented.
- A handful of perfective verbs (such as *rodit'sja* 'to be born^{Perf}' and *skazat'* 'to say^{Perf}') are also presented in Chapter 8, but are not labeled as perfective, rather as verbs that "will be used only in the past tense for the time being" (p. 243).
- The concept of aspect is introduced in Chapter 9 (at the very end of the first or towards the beginning of the second semester). The formation of the future imperfective is first presented, then a brief definition of aspect, then the meanings of the imperfective and perfective (the perfective is explained as referring to complete, one-time actions, normally of short duration or with the result being emphasized. The imperfective is defined as being used in all other, non-perfective circumstances and any situation involving repetitive actions or one-time actions in a condition where the focus is not on the result, but rather on the process or duration). The formation of the future tense in both of the aspects is introduced next. Finally, the concept of aspectual pairs is brought in, as well as the morphological processes involved (prefixation or suppletion).
- In Unit 10, the distinction of the perfective and imperfective in the past tense is presented.

- The concept of verb conjugation in the present tense is distributed throughout Chapters 2-4 (first and second month of study). The verbs introduced are imperfective only.
- The past tense of imperfective verbs only is introduced in Chapter 4.
- In Chapter 5 three perfective marked verbs are presented (such as *rodilsja* ‘was born^{Perf}’), but are not introduced as perfective. They are used in the past tense only.
- Aspect is presented in Chapter 7 (the last chapter, the end of the first semester of study). First, the imperfective in all three tenses (past, present and future) is presented, and then the perfective in the past tense only. Definitions and sample usages of the perfective and imperfective are provided.

In a nutshell, students learning Russian as an L2 are generally taught the imperfective form before the perfective, because the present tense is taught first (the perfective does not exist in the present tense in Russian – a perfective verb with a present-tense conjugation indicates a future meaning). Then when students begin to learn the past tense, they are generally first exposed to the past tense ending only (*-l*), with no explicit instruction regarding aspect (which can occur weeks or even months after learning about the past tense). Thus, past tense forms that the learners initially produce are generally imperfective until the concept of aspect is later introduced, at which point the students then learn both the imperfective and perfective forms of the verbs. Because of this, it is quite possible to predict that L2 classroom learners of Russian at the earlier stages of language learning would use the imperfective as a default form, in much the same way that L2 Spanish learners used the preterit as a default form in Salaberry (1999). This language-learning scenario is a very interesting one in which to test the AH, because the AH makes the developmental prediction that the perfective past is produced before the imperfective

past, likely because the perfective reflects a more prototypical past tense situation. However, the input that beginning-level learners of L2 Russian receive is the opposite of what the AH predicts – the imperfective is introduced first.

Thus, one goal of the present study is to test whether lower-level L2 learners of Russian do indeed produce a default form in the past tense, as in Salaberry's 1999 study. The default form for beginning learners of L2 Russian would likely be the imperfective form, because in an L2 Russian classroom, the imperfective is presented as the morphologically unmarked form, and classroom L2 learners of Russian are generally introduced to the imperfective before the perfective. Additionally, it is possible that because the unmarked imperfective past is introduced first,²⁵ the beginning-level learners initially use the imperfective more often when expressing situations in the past tense. It is also possible that during this time of using the imperfective, the beginners consider it to be an equivalent of their L1 (English) simple past, which, like the Russian imperfective, can be used flexibly with all lexical classes. The following section continues with L1 influence as another potential factor to be taken into account in the testing of the AH.

1.4.2 L1 influence

Shirai (2004) notes that L1 can have a strong effect on the acquisition of tense-aspect morphology, and “therefore it is not surprising that L2 learners use L1 tense-aspect marking as a reference point in making form-meaning associations in L2 learning of similar markers” (p. 105). However, it is necessary to mention that the discussion in Shirai (2004) focuses on the AH in L2

²⁵ The time lag between the introduction of the imperfective past and the perfective past can range from several weeks to several months.

English. The present study intends to expand this discussion by addressing English as the L1, and how L2 learners of Russian (L1 English) conform to the predictions proposed by the AH when learning an L2 whose aspectual system is morphologically more complex than the L1.

Salaberry (2008, pp. 213-224) discusses the influence of the L1 by proposing several factors that relate to why L2 learners of Spanish (L1 English) appear to use the preterit as a default marker, and these factors are also relevant to L2 learners of Russian (L1 English). The first is that inflectional morphology of the English simple past (L1) represents only tense (no aspectual distinctions).

Very briefly, English is a poorly inflected language, and incorporates several inflectional, past tense forms. The simple past, for instance, is often formed by regular or irregular past inflections; essentially, English uses inflectional morphology to express tense rather than aspectual distinctions. Because English is more of a “tense” language, while Spanish is an “aspectual” one, Salaberry (2008) proposes that L2 learners of Spanish (L1 English) initially associate the tense forms (i.e., English simple past) with aspectual ones (Spanish preterit).

Another factor is frequency of input leading to distributional biases in the L2. Because the Spanish preterit frequently appears in the learners’ input, it could thus have an effect on why learners may focus more on that particular verb form when producing speech. The final factor relates to pedagogical practices that focus on the preterit (perfective). Essentially, Salaberry proposes that all of these factors work together to influence how L2 Spanish learners (L1 English) produce tense-aspect forms.

These factors, in relation to L1 English and L2 Russian, will be described below. In the outline of the L1 acquisition studies of Russian aspect, it was mentioned that the perfective appeared earlier and more frequently than the imperfective, suggesting that the perfective past in

Russian can be considered the prototype past. For L2 Russian learners (whose L1 is English) the prototypical past would be the English simple past, so it is possible that these L2 learners might associate the simple past with the perfective aspect. However, I hypothesize that the L2 classroom learners of Russian associate the English simple past with the Russian imperfective, and not the perfective. If L2 learners of Russian are getting their input primarily in the classroom, they may not develop the distributional biases predicted by the AH (that the perfective is associated with telic verbs) because the first semester of study focuses overwhelmingly on the imperfective. As a result, the learners may associate the imperfective, rather than the perfective, as the prototypical past tense form, and I argue that at the beginning stages of acquisition in a classroom setting, the L2 learners initially associate the Russian past tense ending *-l* with the English simple past ending *-ed*, until which time the learners gain more exposure to the L2 tense-aspect system and adjust their interlanguage. During this initial association of the imperfective as the prototypical past, the learners may thus correlate their L1 prototype past (English simple past) with the Russian imperfective.

In order to address whether learners produce a default form, the present study will examine production data (written narratives, oral narratives and conversational interviews), to determine first whether lower-level learners show a preference for using the imperfective in past tense situations.

Additionally, this study will address the potential role of L1 influence, and whether the L2 learners use tense-aspect markers in their L1 as a reference of comparison to tense-aspect markers in their L2. To explore this question, L2 learners of Russian (L1 English) will be given a translation task to test whether beginning-level learners correlate the Russian imperfective with the English simple past. If the lower-level learners do use the imperfective as a default, then the

results from the translation task may show that there is some degree of L1 influence, and can be provided as part of the explanation as to why a default is used (as proposed by Salaberry, 2008).

1.4.3 Elicitation procedure and task type

The third factor I will examine as a condition under which the AH may or may not be supported is elicitation procedure. I will be analyzing three different levels of comparison within the condition of task type:

- 1) the naturalness of the task;
- 2) oral and written modes of production; and
- 3) planning time that is required of the task.

One of the first studies to examine the effect of planning on the production of past tense verbs was Ellis (1987). In this study, 17 low intermediate-level ESL students were asked to provide oral and written narratives under three different conditions. The first condition, the planned writing condition, involved written narratives (where students were given an hour to write the narrative) based on a series of pictures. In the second condition (the planned speech condition), the participants provided oral narratives based on the same series of pictures for the written narratives. This task was considered planned speech because the students were allowed to tell the story twice (but only the second narrative was transcribed and examined). In the final condition (unplanned speech), participants were asked to immediately produce an oral narrative based on a series of pictures different from the written narratives.

The results of this study indicate that in the production of the regular past tense (verbs ending in *-ed*), the participants were much more accurate in the planned writing condition, and

least accurate in the unplanned speech condition.²⁶ Ellis (1987) also concludes that the opportunity for on-line planning is crucial in affecting the accuracy of production, and that while this appears to affect the production of the regular past tense, on-line planning does not appear to influence the irregular past tense (verbs like *went* or *caught*). The regular past tense seems to be most affected due to cognitive processing: the regular past tense involves the application of a simple rule (the addition of the suffix *-ed* to the base form of the verb), and when learners have time to attend to form, they are able to apply the rule (Ellis, 1987, p. 10). However, when learners have little time for planning and focus on form, they may not apply the rule and instead resort to using the base form (Ellis (1987, p. 10) reports that most of the mistakes in the less-planned conditions, which required the regular past tense form, involved using the base form).

When specifically testing the AH, Shirai (2004) identifies elicitation procedure as one area that requires further investigation. In the summary of studies, Shirai (2004) notes that elicitation procedure might affect the degree to which L2 learners abide by the predictions of the AH. For example, many of the studies that do not support the AH (or only partially support the AH) are studies that elicit impersonal narratives (e.g. Salaberry, 1999). Impersonal narratives are a less natural means of language production, in the sense that the participant is often given some sort of cue to produce the past tense. In conversational data, on the other hand, the participant is required to use the past tense in a different context (they are having a conversation instead of producing a one-way narrative). Additionally, in a conversation, the participant is required to produce the past tense along with the present and future tenses. L2 studies involving conversation (a more natural means of production) generally show strong support for the AH,

²⁶ A similar result was obtained by Bardovi-Harlig (1992), in which intermediate-level ESL learners demonstrated both an overall higher appropriate use of the past tense and a higher distribution of the past tense in written narratives as compared to oral narratives. However, the results for irregular versus regular past tense verbs were not reported.

such as Robison (1995) for L2 classroom learners of English, and Andersen (1991) and Lopez-Ortega (2000) for L2 naturalistic learners of Spanish, as noted by Shirai (2004).

Task and planning time may also have an effect on how tense-aspect forms are produced. In a review article on task conditions in L2 studies of Spanish tense-aspect, Bonilla (2010) argues that task time results in differences as to whether the AH is supported; namely, limiting task time and planning time may result in the learners reducing their use of monitor or focus on form (p. 12). Although studies with tasks that allow learners planning time are generally supportive of the AH (Hasbun, 1995; Ramsay, 1990), studies that involve very little or no planning time support either the AH (Camps, 2002; Camps, 2005) or the DPTH (Salaberry, 2002). Therefore, up to this point, the degree to which the AH is supported based on task/planning time is not yet clear.

It is likely that multiple factors come into play when determining the degree to which the AH or DPTH is supported. The present study will address three possible factors, the first two of which are closely interrelated. The first relates to learning Russian aspect in the L2 classroom, more specifically, the order of instruction. Learners are generally taught the imperfective before the perfective, which is contradictory to one of the developmental predictions the AH. Additionally, the imperfective is introduced as morphologically unmarked, and therefore morphologically simpler than the perfective. During the initial stages of language learning in the classroom (when imperfective only is used), it is possible that L2 learners of Russian associate the imperfective past (the aspect that they are exposed to first) with the English simple past, which then leads to the second factor (also proposed by Salaberry, 2008) that will be examined in the translation task: L1 influence.

The third factor that this study will investigate is how elicitation procedures and task types can influence why certain studies but not others show support for the AH's predictions. For example, studies that do not show support for the AH often involve the production of speech, whether oral or written (e.g. Salaberry, 1999), while studies that involve paper-and-pencil tests, such as cloze-type tasks, are generally more supportive of the AH (Bardovi-Harlig & Reynolds, 1995; Collins, 2002).

Another distinction related to elicitation procedure is the comparison of oral and written modalities. With regard to the past tense, some studies have compared oral and written modes of production and have found that learners tend to display a higher percentage of accurate use of the past tense in written modes (Ellis, 1987; Bardovi-Harlig, 1992). In relation to aspectual production, Bardovi-Harlig (1998) tested the AH on L2 classroom learners of English by examining both oral and written narratives. The results showed that the distribution of lexical and grammatical aspect had similar patterns in both the oral and written narratives; that is, there was a higher percentage of past tense markings with achievements and accomplishments, and the progressive occurred more with activities. Although the patterns were similar between oral and written narratives, the oral data showed a much clearer progression of using past tense markers with achievements, then accomplishments, then activities (pp. 484-488), which supports the developmental predictions proposed by the AH. By comparing both oral and written narratives, the present study thus intends to test whether the patterns of aspectual production in oral and written modes are similar or divergent. In other words, this study will test if aspectual production from oral impersonal narratives is more supportive of the AH (as in Bardovi-Harlig, 1998).

In addition to comparing oral and written narratives, the present study also plans to compare the written and oral impersonal narratives with oral conversational data to address the question of whether planning time can influence the degree to which the AH is supported. Because it is unclear whether studies that allow planning time are more consistent with the AH or DPTH, the present study hopes to address this question by comparing production tasks that involve different levels planning time: (1) oral narratives that allow for an intermediate level of planning; (2) written narratives that allow for a higher level of planning (since it takes longer to complete than oral narratives); and (3) oral conversational data with lowest degree of planning.

1.5 SUMMARY

In this chapter I provided background as to how grammatical and lexical aspect are defined and differentiated. I outlined a number of studies that have examined how grammatical and lexical aspect are acquired (both in the L1 and the L2) and introduced the more prevalent hypotheses related to the acquisition of tense and aspect (the Distributional Bias Hypothesis (DBH), the Aspect Hypothesis (AH), and the Default Past Tense Hypothesis (DPTH)). I also described the aspectual system in Russian and how Vendler's typology is applicable to Russian aspect, and developed operational tests in the coding of lexical aspect in Russian. Additionally, several studies related to the acquisition of Russian aspect (L1, heritage learners, L2) were outlined and analyzed.

Finally, I introduced three possible factors that can influence the acquisition of L2 Russian aspect: order of instruction, L1 influence, and task. Regarding order of instruction, L2 classroom Russian provides a very interesting test case for the AH and DPTH because students

initially learn the imperfective (the morphologically unmarked form), while the perfective (which is generally considered the prototypical past tense form) is introduced weeks or even months after the imperfective. This order of instruction goes against one of the developmental predictions of the AH: that the perfective is acquired before the imperfective. L1 influence is introduced as another possible factor. As a result of students being taught the imperfective first, the learners may associate the Russian imperfective with the prototypical past tense form in their L1 (English simple past). The third factor discussed is how elicitation procedure and task type may influence how the AH is substantiated. This study will specifically manipulate the task type variable by analyzing L2 learners' production data of written narratives, oral narratives, and conversations to determine whether lower-level learners produce the imperfective as a default, and whether the different task types demonstrate a difference in support for the AH. These studies will be introduced in the following chapters.

2.0 ASPECTUAL PRODUCTION IN L2 RUSSIAN NARRATIVES

2.1 PURPOSE

The present study has several goals. The first is to determine to what degree L2 learners of Russian at varying levels of proficiency adhere to the predictions proposed by the AH. It is possible that because the imperfective is the unmarked form and is generally introduced before the perfective, beginning-level classroom learners of Russian, like the beginning-level L2 Spanish learners in Salaberry's 1999 study, will assign a "default" past tense form (the imperfective) to verbs regardless of lexical aspect, but that higher-level learners will be more sensitive to lexical aspect when applying tense-aspect markers. Additionally, it is necessary to identify how Russian native speakers (the baseline group) produce lexical and grammatical aspect in narratives. Specifically, this study will determine whether the aspectual production of Russian native speakers conforms to the Distributional Bias Hypothesis (DBH); that is, whether in the past tense there is an association of the imperfective with statives and activities, and of the perfective with accomplishments and achievements. Next, the effect of task type will be examined as a possible factor that can influence the degree to which the AH is supported. Studies 1 and 2 will explicitly compare written and oral narratives to test whether aspectual production in oral and written modalities is similar or divergent, and whether the AH may be supported to varying degrees as a result.

Another reason for conducting this study is that very little is known about the L2 acquisition of Russian aspect. Although Russian is a well-documented language, and Russian aspect has been the focal point of many descriptive analyses, there has been little research conducted on how L2 learners acquire or learn aspect in Russian. Many research studies have tested the Aspect Hypothesis in a variety of target languages, and the present study adds to that body of literature by analyzing the degree to which learners of varying levels of proficiency are sensitive to lexical aspect when applying grammatical markers in L2 Russian.

2.2 RESEARCH QUESTIONS AND HYPOTHESES

This study will therefore address the following questions:

Question 1: Are Russian native speakers sensitive to lexical aspect when assigning grammatical markers?

⇒ **Hypothesis 1:** Because the perfective in Russian is overwhelmingly associated with accomplishments and achievements, and the imperfective with states and activities, Russian native speakers will conform to the predictions proposed by the Distributional Bias Hypothesis (DBH), associating the imperfective more with states and activities and the perfective with accomplishments and achievements.

Question 2: Do L2 Russian learners at different levels of proficiency assign aspectual markers differently in the past tense, or do learners at all levels conform to the predictions proposed by the AH? More specifically, do L2 learners of Russian at the beginning stages of language learning assign the imperfective as a default form?

⇒ **Hypothesis 2:** Because classroom learners are exposed to the imperfective before perfective forms, and past perfective forms are generally introduced after past imperfective forms, the production of aspectual forms by L2 learners of Russian will be more consistent with the Default Past Tense Hypothesis (DPTH); the beginning-level learners will assign the imperfective as a default form, while the higher-level learners will show a greater association between lexical and grammatical aspect.

Question 3: Do different modalities in production affect the degree to which the AH is supported? In other words, is aspectual production in oral narratives more consistent with the AH than in written narratives?

⇒ **Hypothesis 3:** It is hypothesized that aspectual production in oral narratives will show more congruence with what is predicted by the AH, than in written narratives, and will be consistent with the results in Bardovi-Harlig (1998). This study proposes that less planning time, coupled with a more natural means of language production, results in aspectual production more consistent with the AH.

2.3 STUDY 1: WRITTEN NARRATIVES

2.3.1 Method

2.3.1.1 Participants

A total of 42 L2 learners of Russian (15 males, 26 females²⁷, mean age = 21.6) were recruited to participate in the study. The learners' native language was English²⁸, and the participants were university students enrolled in Russian classes (first – fourth year) at the University of Pittsburgh and the College of William and Mary. Their experience learning Russian involved being enrolled in an academic year-long program or a summer intensive program²⁹ (13 of the participants were in the intensive program, and 29 in the year-long program). Most of the learners had prior language learning experience before taking Russian (such as high school Spanish or French). The researcher recruited the participants by going to each of the Russian classes, describing the nature of the study, and asking for volunteers. The L2 learners each received \$10 cash for their participation.

The L2 learners were placed into three proficiency groups (Beginning (n=15), Intermediate (n=14), and Advanced (n=13)) based on a proficiency test that was designed to incorporate a variety of lexical and grammatical items. This exam comprised selected items from the lexical and grammatical sections of the Test of Russian as a Foreign Language –

²⁷ One participant did not report gender.

²⁸ There were a few participants whose L1 was not English (such as Spanish and Korean). The data from these learners were discarded from the study. Additional learners who were discarded included two heritage speakers of other Slavic languages (namely, Polish and Croatian).

²⁹ The intensive program is an 8- or 10-week program, where the learners receive six hours of instruction in the target language every weekday.

TORFL³⁰ (the Russian equivalent of the TOEFL), which is a state-sponsored exam that is used in Russia to determine the proficiency level in L2 learners. Table 5 shows the mean test scores per proficiency level. A one-way ANOVA was performed to ensure that the three groups are different from one another with respect to proficiency level, and the results were statistically significant ($F_{[2, 39]} = 145.23, p < .0005$). A post hoc LSD test indicated that all three groups significantly differed from one another ($p = .05$).

Table 5. Mean proficiency test scores: Written narratives

	Mean score (/30)	SD
Beginner (n=15)	14.8	(1.69)
Intermediate (n=14)	19.1	(1.21)
Advanced (n=13)	25.8	(2.15)

Additionally, it is necessary to note that in order to complete the task, the L2 learners need to have been introduced to aspect, and have had some practice with distinguishing the perfective from the imperfective. Because the concept of aspect may be introduced towards the end of the first semester or even towards the middle of the second semester, it is therefore important to mention that those placed in the Beginning group are not true beginners; each participant has had at least one full semester (or the equivalent) of learning Russian before participating in this experiment.

In addition to the L2 learners, eight native Russian speakers (1 male, 7 females, mean age = 31.9) participated in the study as a control group. These participants are acquaintances of the

³⁰ The test items were chosen from the following sample TORFLs: Rossijskaja gosudarstvennaja sistema testirovanija graždan zarubežnyx stran po russkomu jazyku (1999). Tipovye Testy po russkomu jazyku kak inostrannomu (èlementarnyj uroven'; bazovyj uroven'; I-III sertifikacionnyj uroven'). The Russian Federation State Educational Standard for Speakers of Russian as a Foreign Language (1999). Standardized Tests of Russian as a Foreign Language (elementary level; basic level; I-III certification level). Moscow – St. Petersburg: CMO MGU – Zlatoust Publishers.

researcher, and come from three different Russian-speaking countries (most from Russia, one each from Ukraine and Belarus)³¹ and various professional backgrounds (university students, instructors, businesspersons, etc.). The native speakers each received a small gift for participating.

2.3.1.2 Materials and procedure

The data were collected individually and in small groups in various places on the college campuses (such as in a computer lab, office, or library), and the researcher was present throughout the entire data collection procedure.

The procedure of the study is as follows: the L2 learners first filled out a brief background questionnaire to provide basic information such as date of birth, gender, level of Russian study, and other languages studied (1-2 minutes). They next completed the proficiency exam, which was a timed test (15 minutes), composed of 30 multiple-choice items.

After completing the proficiency test, the students twice watched a brief excerpt (approximately 8 minutes) from the silent film *Modern Times: In the Department Store* (for a specific description of events in the film clip, refer to Appendix A). This film has been used in several studies (e.g., Leary, 2000; Salaberry, 1999; Bardovi-Harlig, 1998; Bardovi-Harlig & Bergström, 1996) to elicit tense/aspect forms in the past tense. After the first viewing, the learners were given the opportunity to ask questions about the video or the upcoming task. The learners were encouraged to use what they know about the Russian language to describe what happened in the film, and they were told that if they were having great difficulty retrieving a

³¹ One participant was an early bilingual (Russian-Ukrainian), but this participant identified Russian as her dominant language.

lexical item, they could ask the researcher for help.³² After watching the video clip for the second time, the students wrote in Russian what happened in the video. They were asked to start their narratives with the phrases *Oднажды* (Once upon a time) or *Давным-давно* (A long time ago) to elicit the past tense in the narratives. The learners were not given a time limit to write their narratives, but most took between twenty and thirty minutes to complete the narratives.

Once the students finished their written narrative, they were given a translation question related to Russian aspect (in order to address the role of L1 influence), the results of which will be reported in section 2.5. This task took approximately 2-3 minutes. The entire procedure took approximately one hour.³³ All directions to the tasks were given to the L2 learners in their L1 (English), and a sample background questionnaire and directions to the task are given in Appendix B.

The native Russian speakers completed a background questionnaire, watched the video clip, and then wrote narratives in their native language. They were given the same cues as the L2 learners to elicit the past tense in the narratives. Directions to the tasks were provided both in the L1 (Russian) and in English (Appendix B.1). The entire procedure for the native Russian speakers took thirty to forty-five minutes.

2.3.1.3 Data analysis

Each of the participants' narratives was examined, with each lexical verb in the past tense coded for lexical and grammatical aspect. However, certain verbs/expressions were excluded from

³² This rarely happened (only a few participants asked for vocabulary items), and the lexical items that were requested were primarily nouns like 'thief', 'barrel' or 'roller skates'.

³³ The completion time seemed to vary from individual to individual (rather than depend on proficiency level, i.e., the advanced learners did not necessarily complete the tasks more quickly). The completion time seemed to depend more on how motivated the participants were to do the task and how detailed they wanted to be.

classification. The copula (*byt'*) was not included because of difficulties in comparing it with lexical verbs (discussed in Shirai (2004, p. 95) and Shirai & Kurono (1998, pp. 269-271)). Also, impersonal constructions that do not contain or that govern a non-conjugated verb such as *emu nado* 'he needs' (or, more literally, 'necessary for him') were omitted from classification. Finally, bi-aspectual verbs (such as *ispol'zovat'* 'to use^{Impf/Perf}') were excluded as well. The verbs were first classified for grammatical aspect as being imperfective or perfective, and then were coded for lexical aspect as one of Vendler's (1957) four verb types: Stative, Activity, Accomplishment, or Achievement. The coding procedures for the Russian data are outlined in section 1.3.4.4. The verb tokens were coded by the researcher, who is a near-native speaker of Russian (L1 English), and whenever difficulties arose in classification, native speakers of Russian were consulted for their intuitions.³⁴

Some issues arose in the classification of L2 learners' production of verbs in the past tense; namely, how to classify a verb or verb phrase when it reflects an error and is used in a non-native like way. Some mistakes among beginning- and intermediate-level L2 learners involve apparent L1 semantic transfer. One error involves the use of the verbs *vzjat'* 'to take^{Perf}' versus *vezti* 'to transport^{Impf}'.

The verb 'to take' in English can have multiple interpretations, for example: taking in the sense of getting or obtaining something (i.e., to take a book out of the library or to take something from someone) or taking someone or something somewhere (in the film clip, the police took Charlie to jail). In Russian, two separate verbs would be used in these circumstances

³⁴ Additionally, the researcher consulted the Russian National Corpus (<http://ruscorpora.ru>) to ascertain whether particular phrases used in the operational tests were compatible with verbs (i.e., whether the adverb *postепенно* 'gradually' could co-occur with a verb being tested as an activity, or whether an 'at' time phrase was compatible with a verb being tested for an accomplishment or achievement).

– *vzjat*’ means taking in the sense of obtaining³⁵, and is coded as an achievement, while *vezti* indicates taking (transporting) someone or something to a particular place, and can be coded as an accomplishment. Because both verbs can be translated into English as ‘take,’ and combined with the fact that the verbs’ phonological makeup is very similar, several learners used the verb *vzjat*’ ‘to obtain’^{Perf}, in a situation where *vezti* ‘to transport’^{Impf}, would have been more appropriate. Example (1) is a sentence produced by a beginning-level learner:

(1) **On vzjal podrugā v magazinē*
 he took-PERF friend-NOM to store-PREP

Example (2) would be a grammatical version of the sentence in (1):

(2) *On (pri)vēz³⁶ podrugū v magazin*
 he took/brought-PERF friend-ACC to store-ACC
 ‘He took/transported/brought his friend (in)to the store.’

In such instances, the actual verb used by the speakers was coded, rather than the intent given the situation: *vzjal* ‘he obtained’^{Perf}, was coded as an achievement, despite the likely intention of the learner to convey a meaning of transporting or leading someone to a place.

There were other cases where some learners “mixed up” verbs, and these errors are likely due to the similarity in phonological composition. Another example of this kind of mistake was the use of the verb *stoit*’ ‘to cost, be worth’^{Impf}, (State), where the verb *stojat*’ ‘to stand’^{Impf}, (Activity) is appropriate:

³⁵ It can also mean ‘to seize’ or ‘arrest’. When used without a prepositional phrase indicating direction or location of the action (this occurred only twice in the data), the verb was coded in the sense of ‘to arrest’, as an accomplishment.

³⁶ A verb even more appropriate to describe the situation shown in the film would be *(pri)vēl* ‘he led/brought’.

(3) * Čarli Čaplin stoil pred bol'šom magazine

Charlie Chaplin-NOM cost-IMPF in front big-PREP store-PREP

*Charlie Chaplin was costing/being worth in front of a big store.

Another error was the use of the verb *slušat* 'to listen' (Activity), where the verb *slyšat* 'to hear' (State) is more fitting. Again, like with the verbs *vezti* versus *vzjat* 'to take', the actual verbs were coded, rather than the learners' likely intentions. Determining learners' intentions through errors such as those described above is a thorny issue in the coding of lexical aspect (for a more detailed discussion of this issue, see Lardiere (2003) and reply by Shirai (2007)). The primary reason I chose to code the actual verb rather than the likely intention is that we cannot truly know what the learners' intents are when they are producing lexical items, and it is difficult to draw the line in which cases we can determine intent and in which we cannot. Additionally, with the verbs meaning 'to take', it is possible that some learners only know one of the verbs (the verb *vzjat* is usually introduced before *vezti*), so it may be that some of the learners simply use the verb that they know or that they have had more practice with and assume that it has the same range of meanings that it does in English.³⁷

Another interesting issue regarding the categorization of verbs involves the learners' production of novel forms. For the written narratives, some misspellings led to ambiguity in how the verbs should be classified. For example, the imperfective form of 'they brought' is *prinosili*, while the perfective form is *prinesli*. Two learners blended these two forms together to produce **prinesili*. Another similar example involves the verb pair *načínat* 'to begin'^{Impf}, – *načat* 'to begin'^{Perf}, in which one particular learner produced the novel form **načnal*. In such

³⁷ As argued in Shirai (2007), it may have been more prudent to discard these types of errors. However, these errors occurred rather infrequently (roughly less than 5% of all tokens) in the data.

cases it is unclear whether the learner intends the imperfective or perfective and as a result, these novel verb forms were discarded from classification.

Two other novel verb forms were produced, which resulted in omission from classification:

- **arestirovali*, from the pair *arestovyvat'* (to arrest^{Impf}) – *arestovat'* (to arrest^{Perf})
- **uvzjali*, a likely blend of the verbs *vzjat'* (to take/obtain^{Perf}) and *uvezti* (to take away^{Perf})

There were, however, some novel verb forms produced that were not discarded. In the production of these forms, the grammatical and lexical aspects of the verb are relatively clear – these verb forms simply entail an additional, unnecessary past tense ending and mostly involve forms of the verb *idti* ‘to go/walk^{Impf}’. The past tense form of the verb *idti* is the suppletive form *šel*. Several learners, rather than producing the suppletive form, added the ending *–l* to the infinitive *idti*, thereby constructing the novel form **idtil*. In these cases, the aspect of the verb is not in question: it is simply an error in past tense ending and this error type was therefore not excluded from classification.

Another interesting observation in the data is that despite the fact that in Russian there is no progressive marker, four beginning-level learners and one intermediate learner attempted to create progressive-like forms in Russian. These learners took the past tense form of *byt'* ‘to be’ (in Russian this can act as either the copula or an auxiliary verb) and placed it before an infinitive. For example:

(4) <i>*Mužčina</i>	<i>byl</i>	<i>pit'</i>	<i>mnogo</i>	<i>vino</i>
Man-NOM	was	drink-INF	a lot	wine-ACC

Such a construction is ungrammatical in Russian (the verb would simply be *pil* ‘he drank/was drinking’), and because there is no past tense ending on the lexical verb, these novel verb forms were not included in the classification.

A list of sample verbs that were commonly used in the narratives and classified according to lexical aspect is provided in Appendix C.

2.3.2 Results and discussion

Table 6 is a summary of results illustrating the distribution between grammatical aspect (the imperfective and the perfective) and lexical aspect (Stative, Activity, Accomplishment, Achievement) for each proficiency level. Table 6 shows total verb counts produced by all learners³⁸ combined (with percentages in parentheses) by level for both past and non-past forms, although the following analysis will focus mainly on the past tense forms. The information on non-past forms is provided so that the total picture of tense-aspect use among the L2 learners and native speakers can be seen.

³⁸ Appendix D shows the distribution of the imperfective and perfective past tense for each individual participant. This information is provided to give the reader an idea how individuals may have varied within the proficiency groups.

Table 6. Written narratives: Distribution between lexical and grammatical aspect (raw counts - percentages)

Beginner (N=15)					
	Stative	Activity	Accomplishment	Achievement	
Past					total
Imperfective	27 (22.1%)	53 (43.4%)	23 (18.9%)	19 (15.6%)	122
Perfective	0	0	17 (18.3%)	76 (81.7%)	93
Non-Past					total
Imperfective	12 (27.9%)	22 (51.2%)	4 (9.3%)	5 (11.6%)	43
Perfective	0	0	0	10 (100%)	10
Intermediate (N=14)					
	Stative	Activity	Accomplishment	Achievement	
Past					total
Imperfective	34 (28.8%)	52 (44.1%)	16 (13.55%)	16 (13.55%)	118
Perfective	0	0	17 (17.0%)	83 (83.0%)	100
Non-Past					total
Imperfective	29 (48.3%)	20 (33.3%)	7 (11.7%)	4 (6.7%)	60
Perfective	0	1 (5.3%)	4 (21.0%)	14 (73.7%)	19
Advanced (N=13)					
	Stative	Activity	Accomplishment	Achievement	
Past					total
Imperfective	35 (32.7%)	51 (47.7%)	13 (12.1%)	8 (7.5%)	107
Perfective	0	1 (0.6%)	32 (19.6%)	130 (79.8%)	163
Non-Past					total
Imperfective	24 (26.4%)	25 (27.5%)	9 (9.9%)	33 (36.2%)	91
Perfective	0	0	2 (11.8%)	15 (88.2%)	17
Russian Native Speakers (N=8)					
	Stative	Activity	Accomplishment	Achievement	
Past					total
Imperfective	10 (20.0%)	33 (66.0%)	2 (4.0%)	5 (10.0%)	50
Perfective	0	1 (0.5%)	50 (24.7%)	151 (74.8%)	202
Non-Past					total
Imperfective	4 (9.8%)	10 (24.4%)	8 (19.5%)	19 (46.3%)	41
Perfective	0	0	2 (25.0%)	6 (75.0%)	8

Several observations can be made when looking at the raw data in Table 6: (1) as proficiency level increases, the overall number of produced verbs increases (Beginners produced 268 tokens, intermediate learners 297 tokens, and advanced students 378 tokens); (2) as a whole, past tense forms were produced more than non-past forms in the written narratives; (3) the perfective forms produced by all learners are overwhelmingly Accomplishments or Achievements; and (4) the distribution of accomplishments and achievements in the imperfective past shows a gradual decrease as proficiency levels increase (beginners have the highest use of the imperfective with telic verbs, with advanced learners having the lowest production of the imperfective with telics) . The distribution of the imperfective past for Beginners indicates that Statives and Activities are used in 65.5% of the verb tokens, while the remaining 34.5% of verb tokens are Accomplishments and Achievements. For Intermediate-level learners, states and activities in the imperfective past are produced in 72.9% of the verb tokens, with accomplishments and achievements making up the remaining 27.1% of tokens. For Advanced learners, states and activities comprise 80.4% of the verb tokens (accomplishments and achievements at 19.6%), while native Russian speakers produced states and activities in the imperfective past in 86.0% of verb tokens (with accomplishments and achievements at 14.0%).

This progression is contradictory to the Aspect Hypothesis' second prediction (repeated here for convenience):

- For languages that use morphological processes to distinguish the perfective and imperfective, learners produce the perfective past before the imperfective past; additionally, learners begin to mark state and activity verbs with the imperfective, then extend the use of the imperfective to achievement and accomplishment verbs.

What appears to be occurring in this case is that the distribution of lexical and grammatical aspect for beginning-level learners is less prototypical, but that as proficiency level increases, learners gradually assign a more prototypical distribution. This indicates that beginning-level learners, in comparison to higher-level learners, may not be as sensitive to a verb's lexical aspect when producing the imperfective.

One additional observation to be made about the data relates to overall production of the perfective and imperfective. The advanced learners and native Russian speakers as a whole showed greater preference in using the perfective in their narratives (native speakers produced the perfective in 80.15% of 252 verb tokens, and advanced learners produced the perfective in 60.4% of 270 verb tokens). The distribution of the past tense forms for the beginning and intermediate learners, on the other hand, shows less of a preference for the perfective (intermediate learners produced the perfective in 45.9% of 218 verb tokens, and beginning learners produced it in only 43.3% of 215 verb tokens). Thus, as proficiency level increases the usage of the perfective increases in narratives.

A repeated-measures ANOVA was applied to these data in order to ascertain whether learners of different proficiency levels use grammatical aspect differently across the various lexical aspect categories, and to ensure that the patterns observed in the data are not due to chance.³⁹ Among the three groups of L2 learners, the three-way interaction between grammatical aspect, lexical aspect, and proficiency level was found to be significant ($F_{[3,78,73.79]} = 4.18$, $p = .005$, partial eta-squared = .177, observed power = .894), which indicates that the participants in the three groups performed differently with regard to producing grammatical

³⁹ The dependent variable in the data is the past tense forms produced in the narratives, the between-groups variable is proficiency level, and the within-groups variables are grammatical aspect (imperfective, perfective) and lexical aspect (Stative, Activity, Accomplishment, Achievement).

aspect and lexical aspect. These differences will be highlighted in the discussion below. Table 7 below shows the mean usage of past tense verbs⁴⁰ by lexical aspect in both the imperfective and perfective.

Table 7. Average numbers of past tense forms in written narratives by lexical/grammatical aspect and proficiency level (based on token counts)

Level	Imperfective				Perfective			
	Stative	Activity	Accomp.	Achiev.	Stative	Activity	Accomp.	Achiev.
Beginning (n=15)	1.80 (2.04)	3.53 (2.56)	1.53 (1.41)	1.27 (1.03)	0 (0)	0 (0)	1.13 (1.30)	5.07 (2.21)
Intermediate (n=14)	2.42 (2.10)	3.71 (2.30)	1.14 (0.86)	1.14 (1.35)	0 (0)	0 (0)	1.21 (1.05)	5.93 (3.19)
Advanced (n=13)	2.69 (2.98)	3.92 (3.04)	1.00 (1.00)	0.61 (0.77)	0 (0)	0.68 (2.80)	2.46 (1.76)	10.00 (5.84)
NS (n=8)	1.25	4.12	0.25	0.62	0	0.12	6.25	18.87 (7.83)

Note: () = SD

The information from Table 7 will be illustrated below in two figures. Figures 2 and 3 show how the proficiency levels distribute lexical aspect in the imperfective and perfective.

⁴⁰ This was calculated by averaging the number of tokens of lexical-grammatical forms produced for each proficiency level.

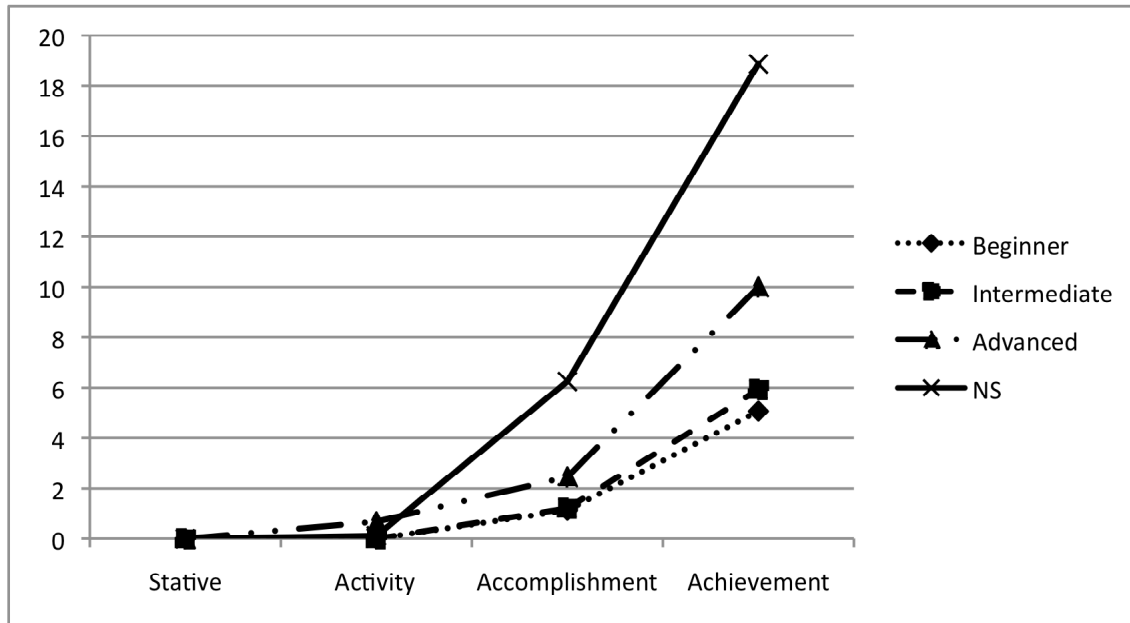


Figure 2. Written narratives: Distribution of lexical aspect in the perfective past (based on average token count)

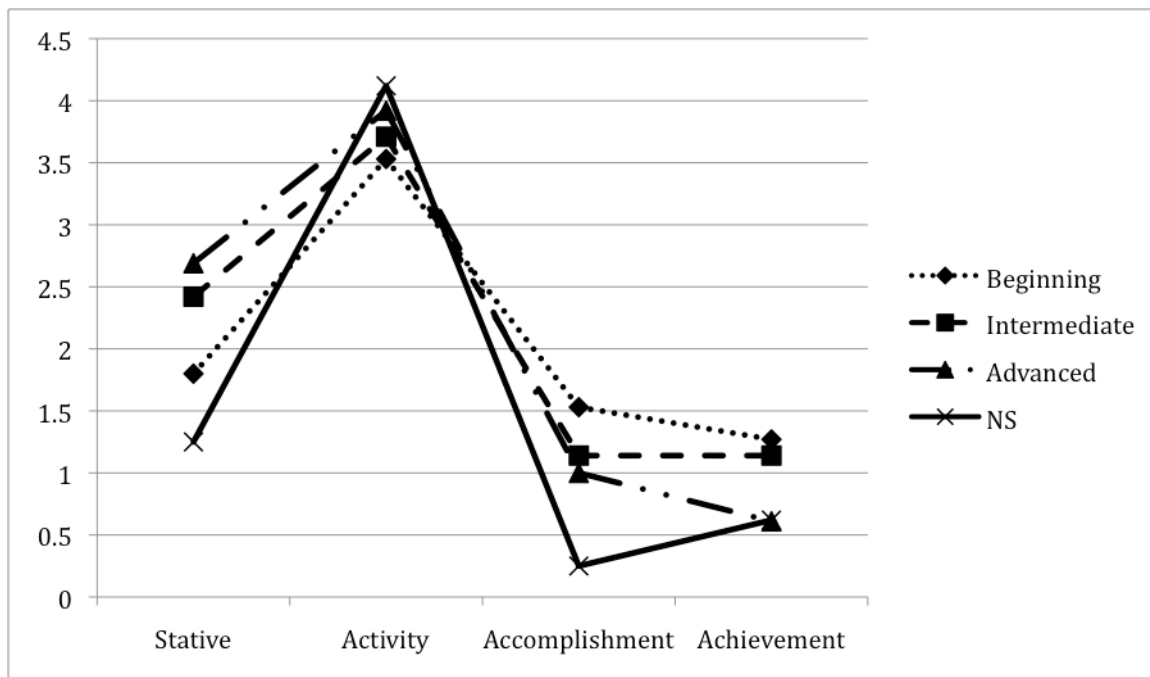


Figure 3. Written narratives: Distribution of lexical aspect in the imperfective past (based on average token count)

Several patterns can be seen in Figures 2 and 3. First, the distribution line of the perfective (Figure 2) has a similar shape across all proficiency levels: overall, the perfective is used very rarely with Activities or Statives, suggesting that learners at all levels appear to know that Activities and Statives are not very compatible with the perfective.

Another trend shown in the above figures is that the distribution lines of the imperfective (Figure 3) also have a similar shape across proficiency levels. Learners at all levels appear to understand that activities and states are more compatible with the imperfective; however, beginning-level learners display the highest use of imperfective in accomplishments and achievements. In fact, the distribution of accomplishment verbs among beginners shows that accomplishments are used more frequently with the imperfective than the perfective (Tables 6 and 7). Although the overall distribution appears to be congruent to the associative predictions of the AH (that the imperfective is produced primarily with atelic verbs, and the perfective with telic verbs), there are three factors that suggest inconsistencies to what is predicted by the AH:

- 1) The progression in how the imperfective is distributed as proficiency levels increase contradicts one of the AH's developmental predictions; beginners display a less prototypical distribution while more advanced learners adhere to a more prototypical distribution (the AH predicts a more prototypical distribution among lower-level learners, and as proficiency levels increase, the distribution becomes less prototypical);
- 2) Lower-level learners (beginning and intermediate levels) show an overall preference for using the imperfective more than the perfective in their narratives, indicating that the imperfective is likely acquired first, which contradicts another

developmental claim by the AH that learners produce the perfective past before the imperfective past; and

- 3) Beginning-level learners of L2 Russian may not be as sensitive to lexical aspect (telic verbs, especially accomplishments) when producing the imperfective, which suggests that these learners view, or at least at some point in their language development viewed, the imperfective as a past tense default form.

The present study addresses two primary questions: whether Russian native speakers and L2 learners are sensitive to lexical aspect when assigning grammatical markers, and whether L2 learners at different levels of proficiency assign these aspectual markers differently in the past tense. In the above analysis of this study's data, the following generalizations can be made with respect to these questions:

- (1) Hypothesis 1 is confirmed, in that the production of past tense forms among Russian native speakers conforms to the predictions of the Distributional Bias Hypothesis (DBH);
- (2) L2 learners of Russian also appear to be sensitive to the lexical aspect of verbs when assigning grammatical aspect (imperfective or perfective) to verbs in the past tense, and the degree of this sensitivity approaches native-like levels as proficiency increases; however,
- (3) There is partial support for Hypothesis 2 (that lower-level learners will assign the imperfective as a default form) because beginning-level learners appear to be only partially sensitive to the interaction between lexical and grammatical aspect: this group's distribution of past tense forms indicates that learners at the beginning level are not as sensitive as the higher levels to the verbs' lexical aspect when producing

the imperfective, suggesting that the imperfective is used as a “default” form in the past tense.

More specifically, when comparing the results of the present study to those of Andersen (1991), and Statements 1 and 2 of the Aspect Hypothesis (AH), we see conflicting results. Andersen (1991) and Statement 2 of the AH proposed that L2 learners acquire the past perfective before the past imperfective, but the results of this study do not support this prediction: Beginners and Intermediate learners use the imperfective more than the Advanced learners and Russian native speakers, suggesting that the imperfective is acquired first. Andersen (1991) and Statement 1 of the AH proposed that achievements and accomplishments appear first with the past perfective. This appears to be the case for achievements (out of all achievement verbs, Beginners produce 80.0% of them in the perfective), but not for accomplishments (Beginners produce 42.5% of accomplishments in the perfective). This suggests that the patterns in the order of acquisition are not quite as clear as those predicted in Andersen (1991) and in the AH.

Thus, the results of this study do show support for the DPTH put forth by Salaberry (1999) because the beginning-level learners appear to assign the imperfective as a default marker. However, there is also some limited support for the associative predictions made by the AH (all learners seem to associate telics with the perfective and atelics with the imperfective, although beginners display less sensitivity to this association when compared with more advanced learners). What is interesting is that in Salaberry’s study, the L2 learners assigned the preterit (the simple past) as the default form, while the L2 learners of Russian in this study appear to prefer the imperfective as the default. Salaberry argues (1999, p. 168) that the L2 learners in his study produced the preterit as the default because the perfective aspect tends to be semantically unmarked. In citing Guitart (1978, p. 142), Salaberry identifies the Spanish preterit

as reflecting a situation that took place before the moment of speech, while the imperfect, in addition to indicating this temporal reference, is also used when another event happened or was happening. In other words, because the preterit indicates only a tense distinction, it is semantically unmarked. The imperfect, on the other hand, signifies an aspectual distinction (like continuous or progressive aspect) in addition to tense, and can thus be considered semantically marked. When expressing a situation in the past tense, Salaberry argues, the preterit acts as the default because the imperfect provides additional, aspectual information.

For Russian, however, the opposite seems to be the case. Forsyth (1970, pp. 6-11), points out that the aspectual opposition in Russian is a privative one: the perfective aspect is considered the semantically (and morphologically) marked form because it can be defined “positively” (Forsyth’s definition of the perfective reflects a “total event” that refers to a single specific point in time), while the imperfective aspect is semantically (and morphologically) unmarked because it is defined “negatively” (that is, it does not inherently represent a total event referring to single point in time). What is interesting is that even though L2 learners have been introduced to the imperfective-perfective dichotomy in Russian in this sense (that the perfective reflects a “one-time, completed action”), and these learners have had practice using the aspects⁴¹, the beginning-level learners still preferred to use the imperfective with verbs that are more compatible with Forsyth’s definition of the perfective (especially accomplishments). A possible explanation for this may be related to the fact that beginners, due to the order and type of instruction, initially view the imperfective not only as semantically unmarked, but also as the morphologically simpler (“unmarked”) form of the aspectual pair.

⁴¹ The majority of beginning-level learners were enrolled in third-semester Russian.

The next step in this analysis is to test Hypothesis 3 (i.e. that data from oral narratives will be more compatible with the AH) and determine whether different modalities (task type) can affect the degree to which the AH or DPTH is supported. Therefore, Study 2 replicates Study 1, but one in which the learners produce oral narratives, as opposed to written narratives.

2.4 STUDY 2: ORAL NARRATIVES

2.4.1 Method

2.4.1.1 Participants

A total of 42 L2 learners of Russian (17 males, 25 females, mean age = 22.9) participated in the study, and were recruited to participate in the same way as in Study 1.⁴² The learners' native language was English⁴³, and were university students enrolled in Russian classes (first – fourth year) at the University of Pittsburgh and the College of William and Mary. The learners were enrolled in either an academic year-long program or a summer intensive program (19 of the participants were in the intensive program, and 23 in the year-long program). As in Study 1, many of the learners had previous language learning experience before taking Russian. The L2 learners each received \$10 cash for their participation.

The L2 learners were placed into three proficiency groups (Beginning (n=13), Intermediate (n=16), and Advanced (n=13)) based on the same proficiency test that was used in Study 1. Table 8 shows the mean test scores per proficiency level. As in Study 1, the results of a

⁴² There was little overlap in participants from Study 1 to Study 2 – only three participants took part in both Studies 1 and 2, and all three tested in different proficiency levels due to the time lag (one year) in recruiting.

⁴³ As with the study involving written narratives, data from any learner whose L1 was not English were discarded.

one-way ANOVA indicate statistically significant differences among all three groups: $F_{[2, 39]} = 75.58, p < .0005$. A post hoc LSD test showed that the three groups significantly differed from one another ($p = .05$).

Table 8. Mean proficiency test score: Oral narratives

	Mean score (/30)	SD
Beginner (n=13)	14.7	(2.75)
Intermediate (n=16)	20.4	(1.41)
Advanced (n=13)	24.8	(1.92)

In addition to the L2 learners, seven native Russian speakers participated in the study as a control group. These participants are acquaintances of the researcher, and come from two different Russian-speaking countries (six from Russia, one from Kazakhstan)⁴⁴ and were primarily university students and educators (7 females, mean age = 28.3). The native speakers each received a small gift for participating.

2.4.1.2 Materials and Procedure

As with Study 1, the data were collected individually and in small groups in various places on the college campuses (such as in a computer lab, office, or library), and the researcher was present throughout the data collection procedure.

The procedure of this study followed the exact same format as Study 1: the L2 learners first filled out a brief background questionnaire (1-2 minutes). They next completed the proficiency exam (15 minutes), after which the students twice watched the same excerpt from the silent film *Modern Times* (approximately 8 minutes). As with Study 1, after the first viewing, the learners were given the opportunity to ask questions about the video or the upcoming task in

⁴⁴ All native speakers identified Russian as their first or dominant language. One participant, however, self-reported as being a balanced bilingual in Russian and English.

English (all directions were given in English), and after watching the video clip for the second time, the students narrated aloud in Russian what happened in the video. Their oral narratives were recorded via Audio Recorder either in a computer lab, or on the researcher's computer. Before speaking their narratives, the students were asked to start their narratives with the phrases *Oднажды* (Once upon a time) or *Davnym-davno* (A long time ago) to elicit the past tense in the narratives. The learners were not given a time limit to say their narratives, but most took between three and eight minutes to complete their narratives.

After the students finished their oral narrative, they were given a translation question related to Russian aspect, which took approximately 2-3 minutes. The entire procedure for the L2 learners took approximately forty-five minutes.

The native Russian speakers completed a background questionnaire, watched the video clip, and then spoke narratives in their native language. Each of these narratives was recorded on the researcher's computer. They were given the same cues as the L2 learners to elicit the past tense in the narratives. The entire procedure for the native Russian speakers took approximately thirty minutes.

2.4.1.3 Data analysis

Each of the participants' narratives was examined, with all lexical verbs coded for lexical and grammatical aspect.⁴⁵ The coding procedure for Study 2 is identical to what is described for Study 1 (section 2.3.1.3). As with the written narratives, the L2 learners produced some of the similar errors in the past tense, and were coded parallel to what is described in section 2.3.1.3.

⁴⁵ The same verbs/expressions excluded from classification in Study 1 were excluded in Study 2 as well (i.e., copula, certain impersonal constructions, bi-aspectual verbs).

2.4.2 Results and discussion

Table 9 is a summary of results illustrating the distribution between grammatical aspect (the imperfective and the perfective) and lexical aspect (Stative, Activity, Accomplishment, Achievement) for each proficiency level. Table 9 shows total verb counts produced by all learners⁴⁶ combined (with percentages in parentheses) by level for both past and non-past forms, although the following analysis will mostly focus on the past tense forms.

⁴⁶ Appendix E shows the results for each individual learner's distribution of the imperfective and perfective in the past tense.

Table 9. Oral narratives: Distribution between lexical and grammatical aspect (raw counts - percentages)

Beginner (N=13)					
	Stative	Activity	Accomplishment	Achievement	
Past					total
Imperfective	29 (33.3%)	47 (54.0%)	5 (5.8%)	6 (6.9%)	87
Perfective	0	1 (1.7%)	5 (8.6%)	52 (89.7%)	58
Non-Past					total
Imperfective	25 (33.8%)	32 (43.2%)	15 (20.3%)	2 (2.7%)	74
Perfective	0	0	1 (33.3%)	2 (66.7%)	3
Intermediate (N=16)					
	Stative	Activity	Accomplishment	Achievement	
Past					total
Imperfective	59 (34.1%)	78 (45.1%)	29 (16.8%)	7 (4.0%)	173
Perfective	0	1 (0.9%)	16 (14.2%)	96 (84.9%)	113
Non-Past					total
Imperfective	35 (60.3%)	19 (32.8%)	3 (5.2%)	1 (1.7%)	58
Perfective	0	0	0	2 (100.0%)	2
Advanced (N=13)					
	Stative	Activity	Accomplishment	Achievement	
Past					total
Imperfective	31 (26.3%)	48 (40.7%)	19 (16.1%)	20 (16.9%)	118
Perfective	0	5 (2.9%)	30 (17.8%)	134 (79.3%)	169
Non-Past					total
Imperfective	32 (32.65%)	32 (32.65%)	9 (9.2%)	25 (25.5%)	98
Perfective	0	1 (6.7%)	3 (20.0%)	11 (73.3%)	15
Russian Native Speakers (N=7)					
	Stative	Activity	Accomplishment	Achievement	
Past					total
Imperfective	17 (27.4%)	33 (53.2%)	10 (16.1%)	2 (3.3%)	62
Perfective	0	5 (2.3%)	47 (22.2%)	160 (75.5%)	212
Non-Past					total
Imperfective	29 (30.5%)	16 (16.9%)	12 (12.6%)	38 (40.0%)	95
Perfective	0	1 (9.1%)	4 (36.4%)	6 (54.5%)	11

We can see several patterns from looking at Table 9: (1) as with the written narratives, past tense forms were produced more than non-past forms in the oral narratives (although the Russian native speakers used non-past forms in oral narratives (106 tokens) approximately twice as much as in the written narratives (49 tokens), suggesting a possible increased preference for using the historical present in oral narratives as opposed to written); (2) the perfective forms produced by all learners are overwhelmingly accomplishments or achievements; and (3) unlike the written narratives (see Table 6), the distribution of accomplishments and achievements in the imperfective past shows a gradual increase as proficiency levels increase. The distribution of the imperfective past for Beginners indicates that Statives and Activities are used in 87.3% of the verb tokens (compared to 65.5% in the written narratives), while the remaining 12.7% of verb tokens are Accomplishments and Achievements. For Intermediate-level learners, states and activities in the imperfective past are produced in 79.2% of verb tokens (compared to 72.9% in the written narratives), with accomplishments and achievements making up the remaining 20.8% of tokens. For Advanced learners, states and activities comprise 67.0% of the past tense verb tokens (compared to 80.4% in the written narratives), and accomplishments and achievements at 33.0%. The distribution of the imperfective past among native Russian speakers did not vary considerably between the oral and written modalities, with states and activities in the imperfective past at 80.6% of tokens (compared to 86.0% in the written narratives), and accomplishments and achievements at 19.4% (14.0% in the written).

Unlike in the written narratives, the progression of the imperfective past seen in Table 9 is consistent with the Aspect Hypothesis' second prediction, that learners begin to mark state and activity verbs with the imperfective, then extend the use of the imperfective to achievement and accomplishment verbs. However, it is difficult to say whether these patterns show complete

support for the AH: another prediction of the AH is that learners produce the perfective past before the imperfective past, but beginning- and intermediate-level learners produce the imperfective more than the perfective in both the oral and written narratives (advanced learners and native speakers show a strong preference for the perfective in their narratives). These data from the oral narratives show a similar result from the written narratives: as proficiency level increases the overall usage of the perfective increases in narratives, both oral and written. There can be several reasons why lower-level learners appear to prefer the imperfective in their narratives, and these possible reasons will be discussed in section 2.6 (General discussion).

As in Study 1, a repeated-measures ANOVA was applied to the oral narrative data. A main effect was found for the independent variables of proficiency level ($F_{[2,39]} = 4.34, p = .02$); lexical aspect ($F_{[4.66,90.79]} = 6.28, p < .0005$); and grammatical aspect ($F_{[2,39]} = 7.99, p = .001$). However, the three-way interaction between grammatical aspect, lexical aspect, and proficiency level only approached significance ($F_{[3.83,74.65]} = 2.14, p = .087$, partial eta-squared = .099, but with a low observed power = .595). When looking at the variables in isolation, the different groups used both grammatical aspect (the imperfective and perfective) and lexical aspect (the four types) differently. However, when we look at a 3-way interaction to ascertain how the groups used both lexical and grammatical aspect in conjunction with each other, it cannot be determined with certainty that the groups performed differently, and that there is an interaction between lexical and grammatical aspect across the proficiency levels. The performance across proficiency levels in this regard seems parallel; in other words, how the beginning-level learners produced lexical and grammatical aspect did not differ significantly from the higher-level

learners.⁴⁷ Despite this, the learners did perform differently with regard to each individual variable, which indicates that we can still draw inferences from some of the patterns seen in the data. Table 10 below shows the mean usage of past tense verbs by lexical aspect in both the imperfective and perfective.

Table 10. Average numbers of past tense forms in oral narratives by lexical/grammatical aspect and proficiency level (based on token counts)

Level	Imperfective				Perfective			
	Stative	Activity	Accomp.	Achiev.	Stative	Activity	Accomp.	Achiev.
Beginning (n=13)	2.23 (3.19)	3.62 (3.93)	0.38 (1.12)	0.46 (0.97)	0 (0)	0.08 (0.28)	0.38 (0.65)	4.00 (3.46)
Intermediate (n=16)	3.69 (2.41)	4.88 (2.25)	1.81 (1.80)	0.44 (0.89)	0 (0)	0.06 (0.25)	1.00 (1.37)	5.88 (3.98)
Advanced (n=13)	2.38 (2.29)	3.69 (2.29)	1.46 (1.33)	1.54 (1.61)	0 (0)	0.38 (0.65)	2.31 (1.75)	10.31 (5.75)
NS (n=7)	2.43	4.71	1.42	0.29	0	0.71	6.71	22.86

Note: () = SD

The information from Table 10 will be illustrated below in two figures. Figures 4 and 5 show how the proficiency levels distribute lexical aspect in the perfective and imperfective.

⁴⁷ This same test was run with the native Russian speaker group and the results turned out to be statistically significant ($F_{[5.47,82.1]} = 10.94, p < .0005$, partial eta-squared = .422, observed power = 1.0). The reason for this is likely due to how the native speaker group produced achievements. Not only was their production of perfective achievements much higher than the other groups, the proportion of imperfective achievements (mean 0.29) and perfective achievements (22.86) was greater than the L2 learners.

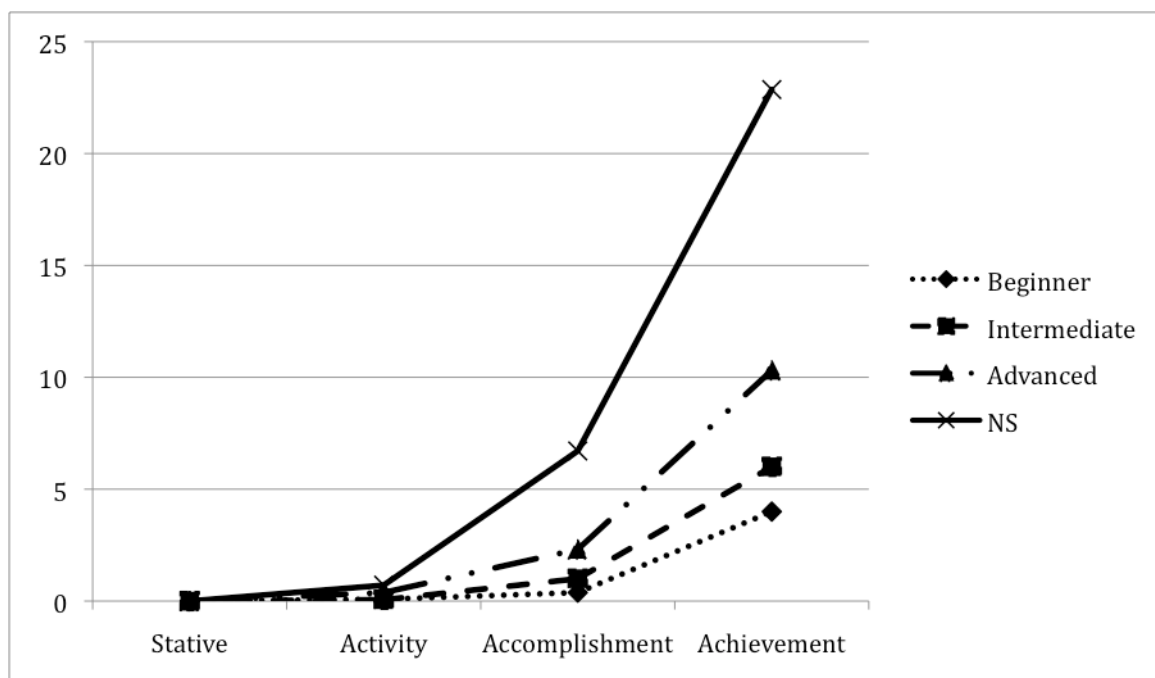


Figure 4. Oral narrative: Distribution of lexical aspect in the perfective past (based on average token count)

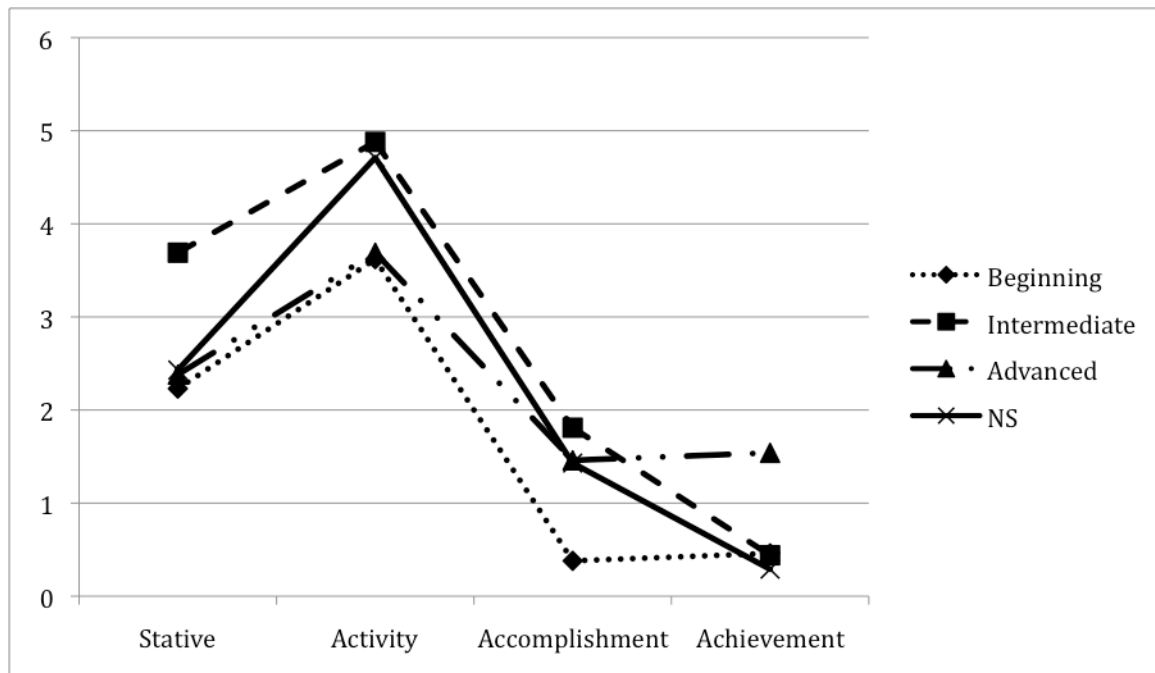


Figure 5. Oral narratives: Distribution of lexical aspect in the imperfective past (based on average token count)

Several patterns can be seen in Figures 4 and 5. First, the distribution line of the perfective (Figure 4) has a similar shape across all proficiency levels: overall, the perfective is used very rarely with Activities or Statives, suggesting that learners at all levels appear to know that Activities and Statives are not very compatible with the perfective. These patterns are consistent with the results from the written narratives in Study 1 (see Figure 2).

Another trend shown in the above figures is that the distribution lines of the imperfective (Figure 5) also have a similar shape across proficiency levels. Learners at all levels appear to understand that activities and states are more compatible with the imperfective, but what is interesting is the rate of use in accomplishments and achievements among beginning-level learners. In the oral narratives, beginners have the lowest overall use of accomplishments and achievements in the imperfective, while in the written narratives (Tables 6 and 7) these learners have the highest overall use of telic verbs in the imperfective. Because of this, the overall distribution of the imperfective past in the oral narratives is more congruent with the AH: in the written narratives beginners display a less prototypical distribution (with the more advanced learners adhering to a more prototypical distribution), but the distribution of the imperfective past among beginners in the oral narratives starts out more prototypical and becomes less prototypical as proficiency levels increase. As a result, the overall distribution in oral narratives appears to show more support for the AH, than the distribution in written narratives.

In the above analysis of this study's data, the following generalizations can be made with regard to these questions:

- (1) As in Study 1, Hypothesis 1 is confirmed in Study 2, in that the production of past tense forms among Russian native speakers conforms to the predictions of the Distributional Bias Hypothesis (DBH);

- (2) Beginning-level L2 learners of Russian in Study 2 appear to perform more like the higher-level learners, in that they seem to be more sensitive to the lexical aspect of verbs when assigning grammatical aspect (imperfective or perfective) to verbs in the past tense. As a result, Hypothesis 2 (that aspectual production by L2 learners will resemble the DPTH) is not confirmed because the beginning-level learners⁴⁸ produce a past tense distribution that is more prototypical of what the AH (rather than the DPTH) predicts, and therefore,
- (3) It appears that different modalities does have an effect on the degree to which the AH is supported. The aspectual production of the oral narratives in Study 2 is more consistent with the AH than in written narratives, and parallels the results found in Bardovi-Harlig (1998). As a result, the findings from Study 2 lend support to Hypothesis 3 (that data from oral narratives, in comparison with written data, will be more consistent with the AH).

Although the results from Study 2 are more consistent with the AH, we still see an inconsistency with what was proposed by Andersen (1991), and Statements 1 and 2 of the Aspect Hypothesis (AH). Andersen (1991) and Statement 2 of the AH proposed that L2 learners acquire the past perfective before the past imperfective, but the results of Study 2 (as in Study 1) do not support this prediction: Beginners and Intermediate learners still use the imperfective more than the Advanced learners and Russian native speakers, which suggests that the imperfective is acquired first. Additionally, Andersen (1991) and Statement 1 of the AH proposed that achievements and accomplishments appear first with the past perfective. While this appears to

⁴⁸ One might raise the point that the beginning-level learners in Study 2 are overall more proficient than those in Study 1. However, this is likely not the case, as the mean scores on the proficiency test were almost identical for both groups.

be the case for achievements in the oral narratives (out of all achievement verbs, Beginners produce 89.7% of them in the perfective), it is not for accomplishments (Beginners produce 50.0% of accomplishments in the perfective). Thus, while the results of Study 2 show stronger support for the associative predictions of AH, lower-level learners still appear to prefer the use of the imperfective in their narratives, whether oral or written. This preference, a possible indication that the imperfective is acquired before the perfective, goes against the developmental prediction (Statement 2) of the AH.

A follow-up question that can be asked, therefore, is what potential factors can account for differences in aspectual production between the different proficiency levels? Task type was listed as one factor, and in comparing Studies 1 and 2, we see that the distribution of lexical and grammatical aspect in oral narratives is generally more consistent with the AH, but that it did not account for the lower-level learners' preference in using the imperfective over the perfective. The second factor, pedagogy, can account for this preference, however. L2 Russian classroom learners are introduced to the imperfective before the perfective forms, and there tends to be an overwhelming focus on imperfective forms in the earlier stages of language learning. During this time of using the imperfective, it is possible that beginning-level learners consider it an equivalent of their L1 (English) simple past. L1 influence is therefore presented as a third possible factor that can explain differences in aspectual production in the past tense among different proficiency levels. The following section will present preliminary results from a translation task intended to explore the factor of potential L1 transfer.

2.5 TRANSLATION TASK

Because I hypothesize that beginning-level learners associate their L1 (English) simple past with the L2 (Russian) imperfective, I designed a translation task intended to explore whether the L2 learners associate any particular L1 features with L2 forms; more specifically, whether the English simple past is associated more with the Russian perfective or imperfective. I designed both open-ended and multiple answer questions, which specifically ask how the learners would translate Russian imperfective and perfective forms into English, and how the English simple past (among other tense forms) would translate into Russian. The intent of the translation task is to see how the learners at different proficiency levels equate the Russian aspectual forms (particularly the imperfective) with English tense forms (mainly the simple past). If we see different patterns among the different groups (especially if the lower-level learners show a greater association between the Russian imperfective and English simple past), then it is possible to suggest that L1 influences the lower-level learners' choice in a default form, as proposed in Salaberry (2008).

Included as part of their participation in Study 1 or 2, each L2 Russian learner (N=84) was asked to answer a short translation question related to aspect in Russian and English. The questions fell into one of four categories (the complete translation questions are provided in Appendix F):

- (1) Russian to English multiple answer: a total of two questions with two Russian verb types (*write* and *read*) were asked. An example of this kind of question: 'What are possible English equivalents for the Russian perfective verb *napisal*?' The learners were then given multiple tense-aspect forms in English (*He wrote, he was writing, etc.*) and were asked to check any and all that apply.

- (2) Russian to English open ended: a total of two questions with examples of three Russian verb types (*read*, *write*, *build*) were asked, for example, ‘How does the Russian perfective (verbs like *napisal*, *postroili*) translate best into English?’ The learners then translated these verb phrases in whatever way they wished.
- (3) The English to Russian multiple answer used a total of six questions incorporating one English verb type (*read*), and learners chose from the Russian imperfective and perfective forms. An example of this question is ‘What are the possible Russian equivalents for the English sentence *he read the book*?’ The learners were then given both the imperfective and perfective equivalents and asked to check those that apply.
- (4) English to Russian open ended: a total of six questions (one English verb type: *read*). Learners were asked to translate the English sentences (such as *He read the book*, *he was reading the book*, etc.) into Russian.

The translation question was the final task for the participants, and each learner was randomly given one of these four question types after writing or speaking their narratives.

Because these questions were distributed randomly, certain group/question combinations had considerably fewer numbers (for example, there were only four advanced-level English-Russian open-ended questions, and only five beginning-level Russian-English open-ended questions). Therefore, any patterns seen from the results of this task will be treated as preliminary findings only, and descriptive statistics only will be presented.

2.5.1 Results and discussion

Since this study focuses on the production of Russian by L1 English learners, the main finding from this task that will be discussed relates to how the L2 learners translate the English simple

past into Russian. Figures 6 and 7 below illustrate the progression in proficiency level of how L2 learners translate the English simple past, with Figure 6 showing the results from the multiple answer questions, and Figure 7 the results from the open-ended questions.

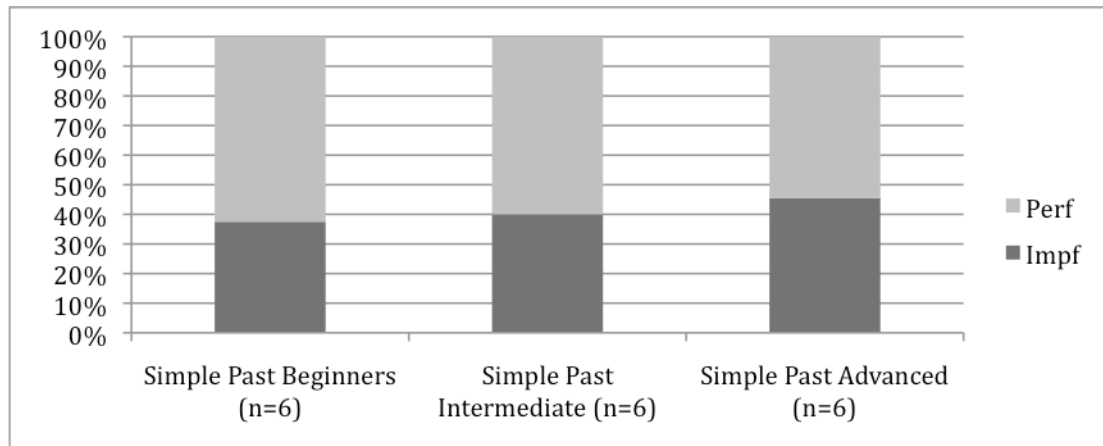


Figure 6. English-to-Russian translation task (multiple answer)

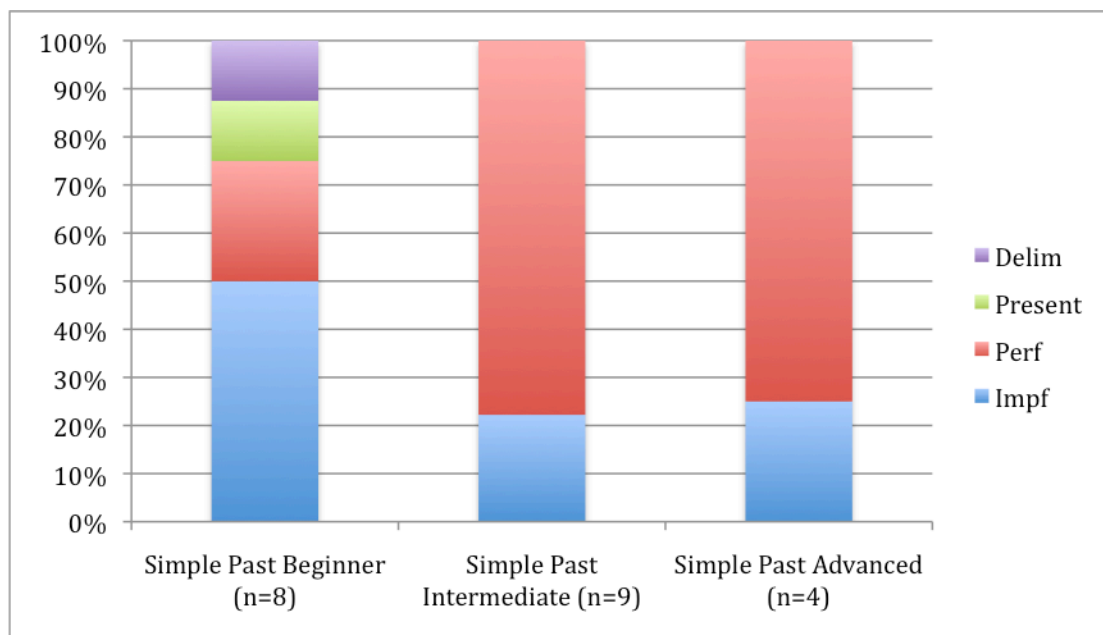


Figure 7. English-to-Russian translation task (open-ended)

What is interesting in the above figures is that the distributions slightly differ according to the type of question asked. For the multiple answer task (Figure 6), the students are given both the imperfective and perfective forms of the verb, and are asked to mark any that are appropriate (one or both forms) in translating an English sentence with the main verb in the simple past. In this task, all L2 learners showed a slight preference for the perfective, but the students' choices had a fairly even distribution – they all seem to understand that the imperfective can be associated with the simple past as well.

In the open-ended task (Figure 7), however, we see a larger difference in the distribution. In this task, the learners were asked to translate into Russian an English sentence containing the simple past (*He read the book*), and were not given any possible answers to choose from. For the beginning-level learners, the distribution of the imperfective was highest (at 50%), followed by the perfective (25%), a present tense form (12.5%) and a delimitative form (12.5%). The intermediate and advanced learners in this task showed an even stronger preference for the perfective (approximately 75-80%) when translating the simple past. This suggests that at some point between the beginning and intermediate levels of language learning, learners may initially be influenced by their L1 but then make a shift in their intuition and start to associate the simple past more with the perfective.

This potential L1 influence, combined with the fact that L2 learners are exposed to the imperfective before the perfective, may account for why beginners prefer to connect the simple past with the imperfective. However, because of the relatively low participant numbers per group and task, the patterns seen here should be treated as preliminary.

2.6 GENERAL DISCUSSION

Studies 1 (written narrative) and 2 (oral narrative) have produced a number of interesting results with regard to aspectual production in L2 Russian. Study 1, an examination of aspectual forms produced in written narratives, showed that learners at all levels are sensitive to lexical aspect in the production of tense-aspect markers, but that beginning-level learners are only partially sensitive, applying imperfective past to all four lexical aspect types. Study 2, in its analysis of past tense verb forms produced in oral narratives, showed similar patterns to Study 1, except that beginners showed a greater sensitivity to lexical aspect when applying tense-aspect markers, restricting imperfective marking mostly to atelic verbs (87.3% in spoken as opposed to 65.5% in written). In both studies, however, beginners (and intermediate-level learners to some degree) showed a very strong preference in producing the imperfective over the perfective in their narratives. The question that can then be raised: why do we see this variation? What factors can possibly explain these differences?

The several factors proposed in the present study are summarized below; namely, the pedagogical factor (of introducing the imperfective before the perfective), L1 influence, and task type (modality).

As previously mentioned, the imperfective past is generally taught before the perfective past because it is morphologically (and semantically) unmarked. It is possible that because the unmarked imperfective past is introduced first,⁴⁹ the beginning-level learners initially use the imperfective more often when expressing situations in the past tense. It is also possible that during this time of using the imperfective, the beginners consider it to be an equivalent of their

⁴⁹ The three textbooks outlined in the previous chapter show that the time lag between the introduction of the imperfective past and the perfective past can range from several weeks to several months.

L1 (English) simple past, which, like the Russian imperfective, can be used flexibly with all lexical classes. Salaberry (2008, p. 215), in relation to morphological markedness, makes a similar proposal for L2 learners of Spanish (L1 English): “a corollary of the fact that English Simple Past marks tense and not aspect is that it is natural for L2 Spanish learners to simply equate Simple Past with Spanish Preterite as proposed by the DPTH.”

Consequently, L1 influence is another possible contributing factor corroborating for the differences in imperfective usage among beginning-level learners, and the translation task given to the participants in both studies was intended to explore possible L1 transfer between Russian imperfective and English simple past. A general observation is that beginners tended to produce the Russian imperfective when asked to translate an English sentence containing the simple past. Although this finding should be treated with caution, as there were relatively low participant numbers for each group and task, this suggests that beginners, at least on some level, associate the simple past with the imperfective.

Another possible reason that lower-level learners prefer using the imperfective in their narratives relates to the morphological complexity of the L2 (and lack thereof in the L1). It is possible that because the Russian perfective can be expressed with a large number of prefixes, the lower-level learners simply did not know all of the perfective forms of the verbs that they produced and chose to keep the verb in the imperfective. However, if these learners think that a particular verb should take the perfective in a given context, they may apply a different perfective marker (such as a frequently used prefix), even if it is an ungrammatical one.⁵⁰ But this was generally not the case, which suggests that the learners in the earlier stages of their L2

⁵⁰ This comes from the author’s own language learning experience, as well as from conversations with other language learners, that if the perfective form is forgotten or unknown, learners would prefer to add one of the more frequently used prefixes (such as *po-*) to the imperfective form to express the perfective.

language development have a limited understanding of how the lexical and grammatical aspects interact in Russian (in particular, with the imperfective aspect). We should remember, however, this is rarely observed in L1 acquisition of Russian, and therefore morphological complexity of perfectives cannot be the sole reason for classroom Russian learners' preference for imperfective as default past tense marker. I will come back to this issue in the final chapter.

The final factor proposed is the effect of task type, more specifically the modality, on the degree to which learners may be sensitive to lexical aspect when producing tense-aspect forms. The distribution of the imperfective among beginning-level learners showed a considerable difference between the two modalities. In the written narratives, the production of the imperfective among beginning-level learners showed a less prototypical distribution in relation to the higher-level learners, which is contradictory to one of the AH's predictions. In the oral narratives, however, the beginning-level distribution of the imperfective was much more prototypical, and the progression in the use of the imperfective from beginners to advanced learners shows greater support for the AH. This indicates that modality does indeed have an effect on the degree to which the AH is substantiated, and I propose that cognitive processing (as suggested in Ellis (1987)) is one reason that we see these differences between modalities. Ellis (1987) found that when more planning time was given, the learners were able to focus on form and apply conscious effort in marking the past tense, but performance improved only for regular morphology (the English simple past *-ed*). In the case of Russian, students have to apply both a simple rule (the imperfective, which involves the addition of the suffix *-l* to the base root of the verb), and a complex rule (the perfective, which involves both the suffix *-l* and the addition of some other affix (usually a prefix)). Overall, when the beginning-level learners had more time to attend to form in the written narratives, they were able to apply both rules (the imperfective was

produced in 57% of past tense tokens). However, when the beginners had less time for planning and focus on form, we see some differences: (1) fewer past tense forms were produced in the oral narratives versus the written narratives (65% of all verb tokens were past tense in the oral narratives, compared with 80% of tokens in the written narratives); and (2) as a whole, more imperfective-marked verbs were produced in both past and non-past forms in the oral narratives (72.5% of all verb tokens were imperfective in the oral narratives, compared to 61.5% in the written narratives).

A possible interpretation of these observations is that because of less planning time and focus on form, the learners had more difficulty applying the complex rule of the perfective, and showed a greater preference to use the imperfective (a simpler rule) and non-past forms (also a simple rule, and one that the learners are exposed to first in instruction). In the next chapter in order to continue with the effect of task type, this research project will present the results of a third study in the following chapter.

2.7 SUMMARY

In this chapter, I identified the purpose, methods, research questions and hypotheses that were used in Studies 1 (written narratives) and 2 (oral narratives). The two studies examined how L2 learners of Russian at various levels of proficiency produced tense-aspect forms in oral and written film-retell narratives, and to test the degree to which the AH or DPTH is supported. Overall, the data from the oral narratives were more consistent with the associative predictions of the AH, than were the written narratives. Additionally, the aspectual distribution in oral narratives showed greater support for one of the developmental predictions of the AH, in that

aspectual production for beginners starts out more prototypical (perfective with telics, imperfective with atelics), then the higher-level learners extend to a less prototypical distribution (perfective with atelics, imperfective with telics). Task type and different modalities (oral versus written) were presented as an explanation for the patterns observed in Studies 1 and 2.

However, the results from both sets of data showed that the second developmental prediction of the AH is disconfirmed – the learners appeared to have acquired the imperfective past before the perfective past. Order of instruction and L1 influence were discussed as possible explanations for this finding, and the preliminary results from a translation task showed that beginners to some degree appear to associate the Russian imperfective with the English simple past.

3.0 ASPECTUAL PRODUCTION IN L2 RUSSIAN CONVERSATIONS

3.1 PURPOSE

The present study addresses similar questions that were asked in Studies 1 and 2. The first is to identify whether the aspectual production of Russian native speakers conforms to the Distributional Bias Hypothesis (DBH), and second, determine to what degree L2 learners of Russian at varying levels of proficiency adhere to the predictions proposed by the AH. In addition, this study will specifically address the question of task type and elicitation procedure. While Studies 1 and 2 compared the effect of modality (oral versus written), Study 3 will investigate the effect of planning time and discourse type by examining aspectual production in conversational data. In comparison to the oral narratives in Study 2, which involved an intermediate level of planning (some pre-task planning and extremely limited online planning), the oral conversational data in Study 3 involve the lowest degree of planning (with no pre-task planning and virtually no online planning). Because of this limited planning time, L2 learners will reduce focus on form and their use of monitor, which will result in more natural language production.

In terms of discourse type, in conversation, one has to shift temporal reference (past, present, and future) according to the need of discourse, unlike a film retell, where one can make a conscious effort to mark past tense. The freer choice of temporal shift presumably will induce

more natural use of language, thus making it more difficult for learners to use monitor to mark past tense.

It is hypothesized that because of less planning time, along with a more natural means of language production, the aspectual production in oral conversations (as in the oral narratives) will be more consistent with the associative predictions of the AH. However, it is also hypothesized that the L2 learners, particularly lower-level learners, will show a greater preference for the imperfective form (in comparison to the oral narratives) when producing the past tense because of the further decrease in use of monitor due to a reduction in cognitive processing time.

3.2 RESEARCH QUESTIONS AND HYPOTHESES

This study therefore addresses the same questions as in Study 2:

Question 1: Are Russian native speakers sensitive to lexical aspect when assigning grammatical markers?

⇒ **Hypothesis 1:** Russian native speakers will conform to the predictions proposed by the Distributional Bias Hypothesis (DBH), by producing the imperfective more with atelics and the perfective with telics.

Question 2: Do L2 Russian learners at different levels of proficiency assign aspectual markers differently in the past tense, or do learners at all levels conform to the predictions proposed by the AH? More specifically, do L2 learners of Russian at the beginning stages of language learning assign the imperfective as a default form?

⇒ **Hypothesis 2:** The production of aspectual forms by L2 learners of Russian will be more consistent with the Default Past Tense Hypothesis (DPTH), in which the beginning-level learners will assign the imperfective as a default form.

Question 3: Do different modalities in production affect the degree to which the AH is supported?

⇒ **Hypothesis 3:** It is hypothesized that aspectual production in oral conversations (as in the oral narratives) will be more consistent with what is predicted by the AH, than in written narratives. This study also proposes that less planning time, coupled with a more natural means of language production, results in learners' preference in producing the imperfective.

3.3 STUDY 3: ORAL CONVERSATIONS

3.3.1 Method

3.3.1.1 Participants

A total of 33 L2 learners of Russian (17 males, 16 females, mean age = 24.2) agreed to participate in the study.⁵¹ The learners' native language was English, and were university students enrolled in a summer intensive Russian program (first – fourth year) at the University of

⁵¹ The researcher recruited the participants by going to each of the Russian classes, describing the nature of the study, and asking for volunteers.

Pittsburgh. As in Studies 1 and 2, most of the learners have had some prior language learning experience before taking Russian.⁵²

The L2 learners were placed into three proficiency groups (Beginning (n=12), Intermediate (n=11), and Advanced (n=10)) based on a similar TORFL-like proficiency test that was used in Studies 1 and 2. The main difference between the tests is that the placement exam for the summer program is about twice as long as the test used in Studies 1 and 2, although the types of questions on both tests are very similar. Table 11 shows the mean scores per proficiency level. A one-way ANOVA shows a statistically significant difference between groups ($F_{[2, 30]} = 57.08, p < .0005$), and post hoc LSD tests revealed that the three groups differed significantly from one another at $p = .05$.

Table 11. Mean proficiency test scores: Oral conversations

	Mean (/65)	SD
Beginner (N=12)	28.1	(6.99)
Intermediate (N=11)	41.5	(2.84)
Advanced (N=10)	52.0	(4.11)

In addition to the L2 learners, three native Russian speakers (three females, mean age = 39.7) participated in the study as a control group. These participants are acquaintances of the researcher, are all originally from Russia, and are university students or educators. The native speakers each received a small gift for participating.

⁵² There was an overlap in participants from Study 2 to Study 3: 17 participants took part in both Studies 2 and 3, and approximately half of them tested in different proficiency levels. The time lag between participating in Study 2 and Study 3, Study 3 data collection (oral proficiency interview) preceding Study 2 data collection, was approximately three weeks (which for the summer intensive program equates to almost three months).

3.3.1.2 Data

Part of the curriculum in the summer intensive program is the participation in oral exams that simulate a conversation setting. Each student participates in these exams at the beginning of the summer program (except for first-year students, who participate at the end of the summer term). The exams are in a conversation/interview format, with an instructor as interviewer and student as interviewee. These interviews last approximately 15-30 minutes, and the instructors assign a proficiency level to each student based on grammatical and pragmatic knowledge and overall communicative competence.⁵³ Because the students in this summer program may come from different language learning backgrounds, the instructors use these interviews as one measure to ensure that the students' communicative abilities correspond to the level in which they are enrolled. One of the program's requirements is to record these interviews and keep them on file. In the recruitment process, the learners were asked to sign a consent form allowing the researcher access to the recorded interviews.

These oral exams intend for the students to display the full range of their language abilities. With regard to tense and aspect, the instructors introduce a variety of situations or ask certain questions to elicit the production of all tenses and both of the aspects. Some sample questions used to elicit the various tenses include:

Past: "You mentioned that last summer you traveled to X. What was that like?";

"Can you tell me a story about something interesting/exciting that happened during your trip?";

"What did you do yesterday?";

⁵³ Regarding the native speaker data, two of the native speaker participants conversed with one of the same interviewers (a native Russian speaker) that conducted the conversations with the student participants (thus ensuring that the interviews were similarly conducted). Another instructor (also a native Russian speaker), who has had prior experience carrying out these types of interviews, interviewed the third participant.

“What was your first day of classes like?”;

“What were your first impressions of X (place)?”

Future: “What do you plan to do after the interview is over?”;

“Where do you see yourself five years from now?”)

Present: “Tell me about yourself”;

“Why do you like/dislike X so much?”;

“What is your typical day like?”).

Thus, in these oral exams, students are required to produce the past tense along with the present and future tenses. Additionally, the nature of the questions and conversational situations that the interviewer introduces enables the learners to produce verbs belonging to the different lexical aspect categories (Statives, Activities, Accomplishments, and Achievements).

3.3.1.3 Data analysis

Each of the L2 learners' conversations was transcribed (while the native speakers' verb forms were transcribed), with each lexical verb coded for lexical and grammatical aspect. The coding procedure for Study 3 is identical to that of Studies 1 and 2 (section 2.3.1.3). As with the written and oral narratives, the L2 learners produced similar errors in the past tense, and were coded parallel to what is described in section 2.3.1.3. The same verbs and expressions that were excluded from classification in Studies 1 and 2 (copula, bi-aspectual verbs, and particular impersonal constructions) were also not included in the analysis for Study 3.

3.3.2 Results and discussion

Table 12 is a summary of results illustrating the distribution between grammatical aspect (the imperfective and the perfective) and lexical aspect (Stative, Activity, Accomplishment, Achievement) for each proficiency level in the oral conversations (the results for each individual participant are provided in Appendix G). Table 12 shows total verb counts produced by all learners combined (with percentages in parentheses) by L2 proficiency level for past and non-past forms, although the following analysis will focus primarily on the past tense forms.

Table 12. Oral conversations: Distribution between lexical and grammatical aspect (raw counts - percentages)

Beginner (N=12)					
	Stative	Activity	Accomplishment	Achievement	
Past					total
Imperfective	15 (29.4%)	28 (54.9%)	8 (15.7%)	0	51
Perfective	0	0	4 (18.2%)	18 (81.2%)	22
Non-Past					total
Imperfective	251 (74.5%)	64 (19.0%)	20 (5.9%)	2 (0.6%)	337
Perfective	0	1 (50.0%)	1 (50.0%)	0	2
Intermediate (N=11)					
	Stative	Activity	Accomplishment	Achievement	
Past					total
Imperfective	33 (44.0%)	38 (50.6%)	2 (2.7%)	2 (2.7%)	75
Perfective	0	0	2 (4.0%)	48 (96.0%)	50
Non-Past					total
Imperfective	348 (73.6%)	84 (17.8%)	34 (7.2%)	7 (1.4%)	473
Perfective	0	1 (5.55%)	1 (5.55%)	16 (88.9%)	18
Advanced (N=10)					
	Stative	Activity	Accomplishment	Achievement	
Past					total
Imperfective	54 (47.8%)	41 (36.3%)	11 (9.7%)	7 (6.2%)	113
Perfective	0	2 (2.0%)	15 (14.7%)	85 (83.3%)	102
Non-Past					total
Imperfective	317 (71.1%)	96 (21.5%)	25 (5.6%)	8 (1.8%)	446
Perfective	0	1 (3.4%)	11 (37.9%)	17 (58.6%)	29
Russian Native Speakers (N=3)					
	Stative	Activity	Accomplishment	Achievement	
Past					total
Imperfective	53 (50.0%)	34 (32.1%)	9 (8.5%)	10 (9.4%)	106
Perfective	0	1 (0.7%)	29 (22.0%)	102 (77.3%)	132
Non-Past					total
Imperfective	138 (59.2%)	50 (21.5%)	19 (8.2%)	26 (11.1%)	233
Perfective	0	2 (5.9%)	7 (20.6%)	25 (73.5%)	34

We can draw several conclusions from looking at Table 12: (1) unlike the data from the narratives, learners at all levels overwhelmingly produced non-past tense forms over verbs in the past (possibly due to the fact that the conversational task required a higher production of non-past forms); 2) like in both oral and written narrative tasks, the perfective forms produced by all learners are overwhelmingly accomplishments or achievements; 3) also consistent with both narrative tasks, as proficiency level increases the overall usage of the perfective in the past tense increases; and 4) as in the oral narratives (and unlike the written narratives), the distribution of accomplishments and achievements in the imperfective is higher among advanced learners than the lower-level learners. The distribution of the imperfective past for Beginners indicates that states and activities are used in 84.3% of the verb tokens (compared to 87.3% in the oral narratives and 65.5% in the written narratives), while the remaining 15.7% of verb tokens are accomplishments (no imperfective achievements were produced). For Intermediate-level learners, states and activities in the imperfective past are produced in 94.6% of verb tokens (compared to 79.2 % in the oral narratives and 72.9% in the written narratives), with accomplishments and achievements making up the remaining 5.4% of tokens. For Advanced learners, states and activities comprise 84.1% of the past tense verb tokens (compared to 67.0% in the oral narratives and 80.4% in the written narratives), and accomplishments and achievements at 15.9%. The distribution of the imperfective past among native Russian speakers did not vary considerably between the narratives and conversations, with states and activities in the imperfective past at 82.1% of tokens (compared to 80.6% in the oral narratives and 86.0% in the written narratives), and accomplishments and achievements at 17.9% (19.4% in the oral narratives, 14.0% in the written).

The progression of the imperfective past seen in Table 12 is consistent with the AH's second prediction, that learners begin to mark state and activity verbs with the imperfective, then extend the use of the imperfective to telic verbs. This holds especially true for achievements: beginners did not produce any imperfective achievements, but the number gradually increased with proficiency level.

However, the same observations in Studies 1 and 2 that contradicted the AH prediction of learners producing the perfective past before the imperfective are found in the conversational data, except that learners at all levels (not just the beginning- and intermediate-level learners) showed an overall preference for using the imperfective past during their interviews, although this preference decreased as proficiency level increased.

As in Studies 1 and 2, a repeated-measures ANOVA was applied to these data. The three-way interaction between grammatical aspect, lexical aspect, and proficiency level was found to be significant ($F_{[3,27,49]} = 5.34, p = .002$, partial eta-squared = .263, observed power = .928). Table 13 below shows the mean usage of past tense verbs by lexical aspect in both the imperfective and perfective.

Table 13. Average numbers of past tense forms in oral conversations by lexical/grammatical aspect and proficiency level (based on token counts)

Level	Imperfective				Perfective			
	Stative	Activity	Accomp.	Achiev.	Stative	Activity	Accomp.	Achiev.
Beginning (n=12)	1.25 (1.76)	2.33 (2.15)	0.67 (0.89)	0 (0)	0 (0)	0 (0)	0.33 (1.15)	1.5 (1.68)
Intermediate (n=11)	3.00 (4.40)	3.45 (4.25)	1.18 (0.40)	0.18 (0.40)	0 (0)	0 (0)	0.18 (0.40)	4.36 (5.04)
Advanced (n=10)	5.40 (2.67)	4.10 (2.47)	1.10 (1.20)	0.70 (0.95)	0 (0)	0.20 (0.42)	1.5 (1.27)	8.50 (5.54)
NS (n=3)	17.67	11.33	3.00	3.33	0	0.33	9.67	34.00

Note: () = SD

The information from Table 13 will be illustrated below in two figures. Figures 8 and 9 show how the proficiency levels distribute lexical aspect in the imperfective and perfective.

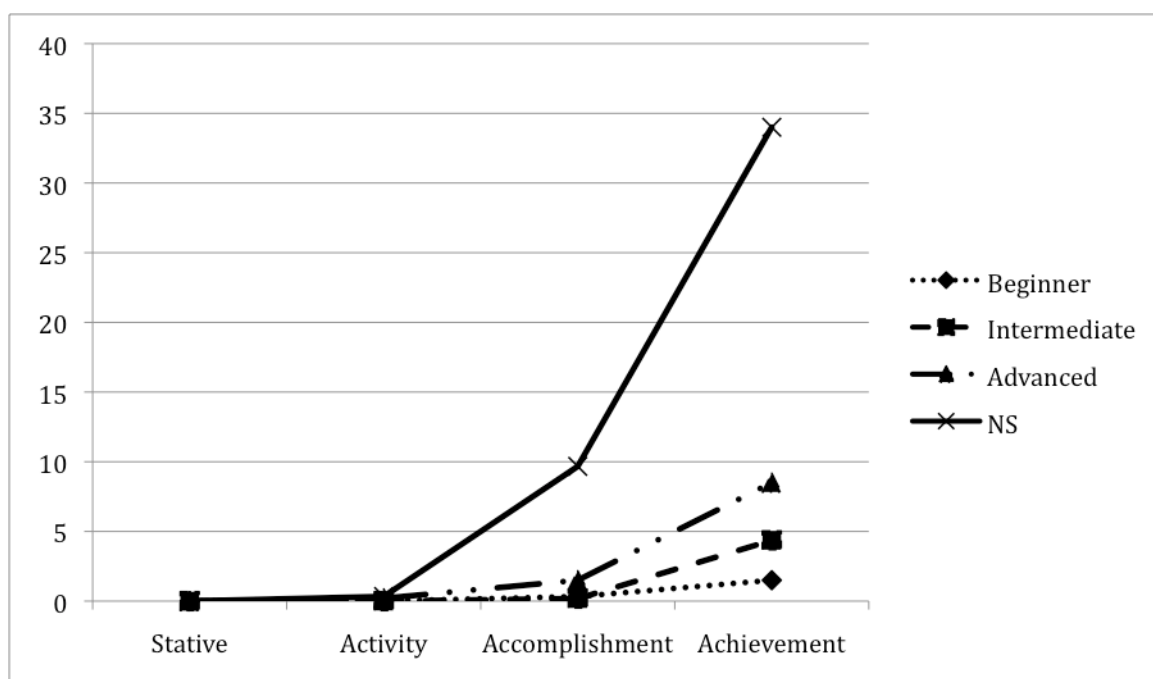


Figure 8. Oral conversations: Distribution of lexical aspect in the perfective past (based on average token count)

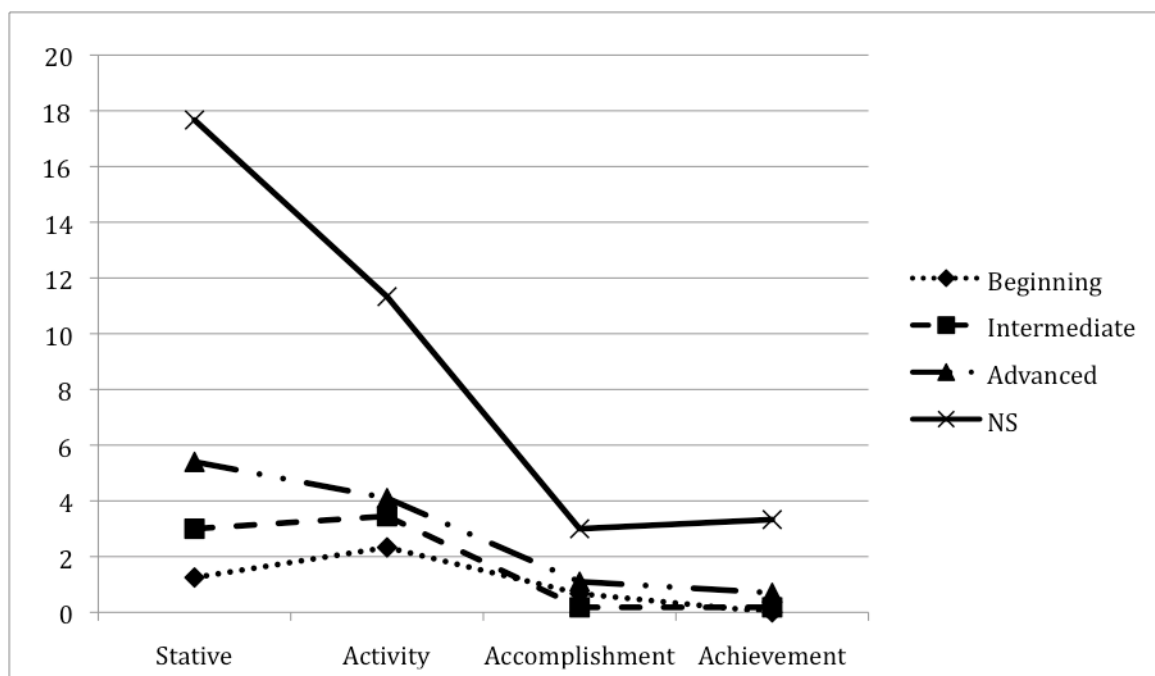


Figure 9. Oral conversations: Distribution of lexical aspect in the imperfective past (based on average token count)

Certain patterns can be seen in Figures 8 and 9. First, the distribution line of the perfective (Figure 8) has a similar shape across all proficiency levels: this pattern is also seen across all task types (in Studies 1, 2 and 3), suggesting there is no effect on task type in the production of the perfective past. No matter what the task, learners at all levels appear to know that activities and statives are not very compatible with the perfective. Additionally, in all three studies, the production of the perfective past in accomplishments and achievements gradually increases with proficiency level.

Another trend from the conversational data is that there is a similar shape in the distribution lines of the imperfective (Figure 9) across all L2 proficiency levels. The native speakers show a different kind of distribution: imperfective states and activities are produced at a much higher rate among native speakers than among the L2 learners. As a whole, when producing personal narratives in the past, native speakers (when compared to the L2 learners,

especially the lower-level learners) tended to expound more on their opinions and feelings about the situation, and as a result, phrases like *mne nraivilsja* ('I liked'); *mne kazalos', čto* ('it seemed to me that'); and *ja ponimala* ('I understood') tended to be more prevalent in the speech of native speakers (the L2 learners did express phrases like these, but more often in the present tense).

Overall, L2 learners at each level appear to understand that activities and states are more compatible with the imperfective, but what is interesting is the production of imperfective accomplishments and achievements among beginning- and intermediate-level learners. In Study 2 (the oral narratives), the beginners have the lowest overall use of accomplishments and achievements in the imperfective, while in Study 1 they have the highest overall use of telic verbs in the imperfective. Because of this, it was proposed that the overall distribution of the imperfective past in the oral narratives is more congruent with one of the developmental predictions of the AH because while beginners display a less prototypical distribution in their written narratives (with the more advanced learners adhering to a more prototypical distribution), the distribution of the imperfective past among beginners in the oral narratives starts out more prototypical and becomes less prototypical as proficiency levels increase. In the conversational data, however, beginners produce slightly more telic verbs in the imperfective (8 imperfective accomplishments) than do the intermediate learners (2 accomplishments and achievements each), so the progression is not as clear-cut as was seen in Study 2. Yet, as a whole, all L2 learners produced fewer imperfective telic verbs in the conversational data than in oral narratives. The overall distribution in oral conversations, therefore, is supportive of the associative predictions of the AH.

An interesting difference of the conversation data from narrative data is that the L2 learners at all levels (not just the beginning and intermediate levels, as seen in Studies 1 and 2) in

their interviews show an overall preference for using the imperfective more than the perfective. This is even stronger evidence for the claim that the imperfective in L2 Russian is likely acquired first, which contradicts one of the AH's developmental predictions that learners produce the perfective past before the imperfective past.

In comparison with Studies 1 and 2, the data from Study 3 show some other patterns related to the effect of task type and planning time. It was suggested in Study 2 (oral narrative) that when learners had less time for planning and focus on form, fewer past tense forms were produced than in written narrative task, and there was an overall preference to use imperfective-marked verbs over the perfective in the past tense. I proposed (based on Ellis (1987)) that this was due to the demands on cognitive processing: that the learners preferred to apply the simpler rules (present tense formation, imperfective past formation) and had greater difficulty with the complex rule (perfective past formation). In examining tense-aspect production in oral conversations, it appears that the data further these patterns.

As noted earlier in this section, the first pattern observed is that among all L2 learners, there was an overwhelming preference for non-past tense forms in conversations, while that was not the case for native speakers. More specifically, beginners produced non-past forms in 82.3% of tokens (compared to 35% in oral narratives), intermediate learners produced the non-past in 79.7% of tokens (17.3% in oral narratives), and advanced learners used the non-past in 68.8% of tokens (28.3% in oral narratives). The Russian native speakers, however, showed a more equal distribution of past and non-past forms in the conversations (47.1% in the past, 52.9% in the non-past), and when comparing the data from oral narratives to conversations, the native speakers do show a jump in their use of the non-past (27.9% of tokens in oral narratives to 52.9% in conversations).

One might argue that we see this jump across all groups because of the demands of a conversational task – that overall, a conversation requires greater use of non-past tense forms. However, I argue that this is only part of the picture, and that the increased demand on cognitive processing (due to lack of planning) is a more important explanation. For example, three beginning-level learners and one intermediate learner produced not one past tense form in their conversations. Additionally, several learners appeared to show great difficulty in producing a past tense form, despite promptings from the interviewer. Below are two excerpts from conversations that illustrate this difficulty (“I” indicates interviewer, “P” means participant). An English translation is provided below the transliteration; additionally, past tense forms are in boldface while non-past forms are italicized. The first excerpt is from a conversation with a beginning-level learner:

I: Ponjatno, èto ja *ponimaju*. Skažite, vam *nравitsja* Pittsburgh?
Understood, this I *understand*. Tell me, do you *like* Pittsburgh?

P: Da. Am ... bo- bol’šoj aa kam-kampus i am mne *nравitsja*.
Yes. Uhm... bi-big uh cam-campus and um I *like* it

I: A čto vy uže **delali** v Pittsburgu, čto vy včera **delali**?
And what **have** you already **done** in Pittsburgh? What **did you do** yesterday?

P: V parke?
At the park?

I: V Pittsburgu, čto vy včera **delali**? Vy **priexali** včera, da?
In Pittsburgh. What **did you do** yesterday? You **arrived** yesterday, yes?

P: Da. Mm.
Yes. Hm.

I: I čto vy **delali**?
And what did you do?

P: Mmm Am kvar- v magazini i am ... mm.. da.
Hmm. (pause) Um, apartme- in stores and um (pause) hmm. Yes.

I: No vy, vy včera **obedali** ili.. v restorane, da?
But you, **did** you **have dinner** yesterday or... At a restaurant, yes?

P: Da, am ja am ...I've only been since school....
Yes, um. I um (then speaks English) I've only been since school..

I: Ja ne *ponimaju* po-anglijski, da.
I don't *understand* English. Yes.

P: Da? Xorošo. Am ja ja **ljubil** v restoran, v Pittsburg.
Yes? OK. Um, I, I **loved** to a restaurant, to Pittsburgh.

The second excerpt is from a conversation with an intermediate-level learner:

I: Skažite požalujsta, kogda vy vot vy nedavno **zakončili** universitet, da? Am, v Pittsburgu **bylo** trudno učit'sja? V ètom universitete?
Tell me please, when you, so you **graduated** from college not too long ago, yes? Uh, **was** it difficult being a student in Pittsburgh? At this university?

P: ..um čto?
Uh, what?

I: Zdes' trudno **bylo** učit'sja, u vas **byli** trudnye dni?
Was it difficult being a student here, **did** you **have** difficult days?

P: Am... am mne ne trudno.
Um, um it's not hard for me.

I: A kakoj u vas **byl** tipičnyj den'? V universitete.
And what kind of a typical day **did** you **have**? At the university.

P: Am, ja ne *znaju*, aa..
Um, I *don't know*, uh...

I: čto vy **delali** každyj den'?
What **did** you **do** every day?

P: Každyj den'? Am, nemnogo, aa ja ja *rabotu* aa v biblioteke i am ja mnogo *est* ja *ljublju* piccu.
Every day? Um, not much, uh I I *work* uh at the library, and um (pause) I *to eat* a lot, I *love* pizza.

I: Ponjatno. A skažite, čto vy **delali** v biblioteke?
Understood. So tell me, what **did** you **do** at the library?

P: Am, ja aa vseгда am *organizacuju* am vsju knigu aa. Èto vsë.
Um, I always um *organize* (novel present tense form) um each book. That's all.

I: Èto vsë. Èto xorošaja rabota?
That's all. Is it good work?

P: Aa, ja ne **dumal**, ja ne *dumaju* aa ja am *polučaju* den'gi.
Uh, I **didn't think**, I *don't think*, uh I um *get* money.

The two conversational segments above illustrate the difficulty several learners had in producing the past tense, despite numerous promptings from the interviewer. Although this study did not perform obligatory context analysis, these examples do show that learners are having difficulty producing a past tense form when they should. Therefore it is likely that for many lower-level learners the present tense is like a default, in the sense that when they are in a situation where they do not feel obligated to produce the past (such as a conversation), even if it is warranted (such as a film retell that cues them to produce the past), they prefer to produce the present tense.

The overall purpose of Study 3 was to address several questions. In addition to confirming whether Russian native speakers conform to the Distributional Bias Hypothesis, and whether L2 learners at different levels of proficiency assign aspectual markers differently in the past tense, Study 3 (like Study 2) investigated the role of task type on the distribution of lexical and grammatical aspect. In the above analysis of Study 3's data, the following generalizations can be made:

- (1) Similar to Studies 1 and 2, Hypothesis 1 is confirmed in Study 3, in that the production of past tense forms among Russian native speakers is consistent with the predictions of the Distributional Bias Hypothesis (DBH);

- (2) As in Study 2, Hypothesis 2 (that aspectual production will be more consistent with the DPTH) is not fully confirmed because the beginning-level learners produce a past tense distribution that is more prototypical of what the AH (rather than the DPTH) predicts; and
- (3) It appears that different task types do have an effect on the extent to which the AH is supported. The aspectual production of the oral narratives in Study 2 and the oral conversations in Study 3 shows more consistency with the AH than in the written narratives from Study 1. Additionally, a difference was found in the aspectual production when comparing oral narratives and oral conversations – learners at all levels (not just the beginners) preferred to use the imperfective when producing the past and non-past tenses in a conversational setting.

Although the results from Study 3 show support for the associative predictions of the AH, the last part of point (3) does not support the developmental prediction proposed by Statement 2 of the AH: that L2 learners acquire the past perfective before the past imperfective. In the conversational data, beginners, intermediate learners, and even advanced learners prefer to use the imperfective more than the perfective in the past tense, which is further evidence that the past imperfective is acquired first. Possible reasons for the patterns observed above will be outlined in the following chapter.

3.4 SUMMARY

In this chapter, I analyzed tense-aspect production in conversational data, and reported and discussed the findings from the study. Overall, the aspectual distribution of native Russian

speakers conforms to the DBH. Additionally, the associative predictions of the AH are confirmed, in that the L2 learners appear to associate the imperfective with atelics and the perfective with telics. However, one of the developmental predictions of the AH is disconfirmed because learners at all levels showed a preference for using the imperfective in the past tense, suggesting that the imperfective (and not the perfective) is acquired first. Additionally, in comparison with Studies 1 and 2, the L2 learners in Study 3 showed a greater preference for non-past forms. I proposed that one possible explanation of this was that the lack of planning time placed higher demands on the learners' cognitive processing, thus resulting in the learners' preference for producing the present tense over the past.

4.0 CONCLUSIONS

This final chapter will summarize the three studies conducted in this dissertation, and highlight how the findings contribute to the field of second language acquisition. The chapter will then conclude by identifying remaining questions and proposing avenues of future research.

4.1 SUMMARY

The three studies conducted in this research project have produced several interesting results with regard to aspectual production in L2 Russian. Study 1 (written film-retell narrative) showed the following:

- (1) Learners at all levels show some degree of sensitivity to lexical aspect in the production of tense-aspect markers (i.e. associations between imperfective aspect and atelic verbs, and between perfective aspect and telic verbs), suggesting support for the associative predictions of the AH, but that beginning-level learners are only partially sensitive, suggesting support of DPTH.
- (2) Out of all the L2 learners, the beginners displayed the least prototypical distribution of the imperfective in that they used imperfective with all verb classes, while the intermediate and advanced learners had a more prototypical distribution (i.e. stronger

association of atelic and imperfective past). This kind of progression in how learners assign grammatical aspect to verbs in the past tense contradicts one of the developmental predictions of the AH (that learners start out with a more prototypical distribution, which then extends to a less prototypical distribution).

- (3) The beginners also showed an overall preference for using the imperfective in their written narratives, suggesting that the imperfective is acquired before the perfective, which disconfirms another developmental prediction of the AH (that the perfective past is acquired before the imperfective).
- (4) The use of the perfective was strongly associated with telic verbs across all proficiency levels, suggesting that this association is present during the initial stages in the acquisition of Russian tense-aspect forms.

Study 2, which examined past tense verb forms produced in oral narratives, showed some similar patterns to Study 1, but the aspectual production of beginners showed greater consistency with the AH's predictions. It was found that:

- (1) The L2 learners at all levels were sensitive to lexical aspect when applying grammatical markers (the perfective was associated primarily with telic verbs, and the imperfective was linked to atelic verbs), thus confirming the associative predictions of the AH.
- (2) Unlike Study 2, the beginners displayed the most prototypical distribution of the imperfective, with the more advanced groups showing a less prototypical distribution. This supports one of the developmental claims made by the AH.

- (3) Compared to Study 1, the beginners also showed a greater preference for using the imperfective in the past tense, which does not support the AH's prediction that the perfective past appears before the imperfective past.
- (4) Similar to Study 1, the perfective is found primarily with accomplishments and achievements in all proficiency levels.

Study 3 investigated how L2 learners produce tense-aspect forms in a conversational setting, and generally found similar results to Study 2:

- (1) The L2 learners associated the perfective primarily with telic verbs, and the imperfective mainly with atelic verbs.
- (2) The beginning and intermediate groups showed a more prototypical distribution of lexical and grammatical aspectual forms, while the advanced group had a less prototypical distribution.
- (3) All L2 learners (not just beginners) preferred to use the imperfective past in their conversations.
- (4) Similar to Studies 1 and 2, all L2 learners showed a strong correlation between the perfective and telic verbs.

Overall, the data from the written narratives were less supportive of the AH when compared with the oral narratives. The results from these studies therefore suggest that task type can determine the degree to which the AH is supported in L2 Russian. When comparing aspectual production from written and oral data, the oral data showed greater consistency with what the AH proposes. This is likely due to the fact that the oral modality of production generally involves less on-line planning and a reduction of focus on form, resulting in more natural language production.

In fact, Ellis (1987) proposed that the demand on cognitive processing is greater when there is less planning time, and therefore learners have more difficulty applying rules (especially more complex rules, i.e. irregular past). The results from Studies 1 and 2 are analogous to Ellis' findings: generally speaking, when the learners (particularly the beginners) had more time to attend to form in the written narratives, they were able to produce both imperfective and perfective past. However, in the oral narratives the beginners showed a preference for producing imperfective forms in the past (which involves a simple, regular rule), and also could not produce as many forms in the perfective past (which involves a more complex, irregular form).

In comparing the data from oral narratives and conversations (Studies 2 and 3), the results further Ellis' (1987) claim that planning time affects the way learners apply rules. Ellis found that with more planning time, performance on regular past *-ed* improved, but not irregular past. In the same vein, L2 Russian learners may be able to apply simple past tense formation of imperfective aspect with planning time (written narrative), while perfective past formation is constant across spoken and written narrative. For example, the beginning-level learners showed the highest token count of imperfective past in the written narratives (Study 1, Table 6), largely due to the higher level of telic imperfectives produced (which account for 34.5% of imperfective past tense forms, as opposed to 12.7% in the oral narratives (Study 2, Table 9) and 15.7% in the conversations (Study 3, Table 12).

These data also have implications in the implicit-explicit learning distinction described in DeKeyser (1995). DeKeyser's hypotheses state that implicit learning (where learners are not aware of learning, and induce rules or patterns for themselves) is better for learning "fuzzy" complex rules. Explicit learning, on the other hand, is hypothesized to be better for learning simple, categorical rules. This concept can be applied to Russian aspect: the imperfective

involves the addition of the suffix *-l* and is highly regular and categorical (even in the case of marked imperfectives, the suffix used is also highly regular). The perfective, on the other hand, can be considered more of a “fuzzy” rule because there is no clear-cut method to determine which affix applies to which verb.

If we apply the concept of implicit versus explicit learning to how lexical and grammatical aspect interact in the production data from L2 learners, we can hypothesize that explicit learning would be more applicable to telic imperfectives and atelic perfectives, while implicit learning would be better for atelic imperfectives and telic perfectives for beginning learners. Essentially, associating atelics with the imperfectives and telics with the perfective can be attained more easily through implicit means because of high frequency in the input, while the perfective with atelics and the imperfective with telics are harder because they are infrequent. To compensate for these difficulties, one can use monitor to apply simple rules of imperfective marking with telics, but this does not work for atelic perfectives because formation of perfective past forms constitutes fuzzy rules for which explicit knowledge does not really help (Ellis, 1987; DeKeyser, 1995). The following tables (Tables 14 and 15) below show how the different L2 learner groups produced these combinations across the different task types:

Table 14. Production of perfective telics in the task types (percentage of tokens)

	Beginner	Intermediate	Advanced	Native Russian
Written narratives	100%	100%	99.4%	99.5%
Oral narratives	98.3%	99.1%	97.1%	97.7%
Conversation	100%	100%	98%	99.3%

Table 15. Production of imperfective atelics in the task types (percentage of tokens)

	Beginner	Intermediate	Advanced	Native Russian
Written narratives	65.5%	72.9%	80.4%	86%
Oral narratives	87.3%	79.2%	67%	80.6%
Conversation	84.3%	94.6%	84.1%	82.1%

Thus when comparing how telicity and grammatical aspect interact in the production of the past tense, we can conclude that the L2 learners need to use their monitor more when producing more non-prototypical combinations, but monitor does not work for the perfective which involves fuzzy rules; thus we see the task effect especially in the production of the telic imperfective, not of the atelic perfective. The written modality (Study 1) offers more planning time, and as such, the imperfective is produced with telic verbs twice as often as it is produced in the oral tasks. In other words, learners need to use monitor to produce regular past forms that are not part of their implicit knowledge. The following illustrates the parallel between the present study (L2 Russian) and Ellis (1987, L2 English):

	Explicit knowledge (better with more time)	Implicit knowledge (no improvement with more time)
Ellis (1987)	regular past	irregular past
Present study	imperfective past	perfective past

One other characteristic of the L2 production data that I would like to point out is the overall preference for beginners (and intermediate-level learners to some degree) to use the imperfective in the past tense in both narrative tasks (Studies 1 and 2). In addition, Study 3 showed a somewhat surprising result related to this preference: not only did the beginners and intermediate learners prefer the imperfective over the perfective when producing past tense

forms, the advanced learners showed a slight tendency for this preference as well (but this did not occur for the advanced learners in any of the narrative data). This overwhelming preference to use the imperfective over the perfective in the past tense across all three task types conflicts with the AH prediction that the perfective past is acquired before the imperfective past. This then raises the question as to why L2 Russian learners (especially beginners) show this inclination to use the imperfective, regardless of task type. I propose two corroborating factors that may explain why this is the case.

The first factor is pedagogical in nature. In L2 Russian classrooms, the imperfective past is generally taught before the perfective past because it is morphologically unmarked⁵⁴. It is possible that because the unmarked imperfective past is introduced first, the beginning-level learners initially use the imperfective more often when expressing situations in the past tense. Then, after being exposed to the perfective (which all learners appear to understand is more compatible with accomplishments and achievements), the beginning-level learner must readjust his/her understanding of how the lexical and grammatical aspects interact in Russian (especially, their understanding of the imperfective). Additionally, it is also possible that during the time of using the imperfective only in the past tense, the beginners consider it to be an equivalent of their L1 (English) simple past, which, like the Russian imperfective, can be used flexibly with all lexical classes.

Consequently, L1 influence is another factor that may contribute in the explanation for differences in imperfective usage among beginning-level learners. The translation task given to the participants in Studies 1 and 2 was intended to survey whether L2 learners associated the Russian imperfective with the English simple past. One of the findings from this task is that

⁵⁴ There are marked imperfectives, but for the beginning learner, who will not be introduced to these forms much later in their language learning, the imperfective is viewed as the “unmarked” form.

beginners did tend to produce the Russian imperfective when asked to translate an English sentence containing the simple past. This suggests that beginners, at least on some level, may associate the simple past with the imperfective, and may be influenced by their L1 when producing tense-aspect forms.

Another possible reason that lower-level learners prefer using the imperfective in the narratives and conversations relates to the morphological complexity of the L2 (and lack thereof in the L1). It is possible that because the Russian perfective can be expressed with a large number of prefixes, the lower-level learners simply did not know all of the perfective forms of the verbs that they produced and chose to keep the verb in the imperfective. However, if these learners think that a particular verb should take the perfective in a given context, they may apply a different perfective marker. But this was generally not the case⁵⁵, which suggests that the learners in the earlier stages of their L2 language development simply have a limited understanding of how the lexical and grammatical aspects interact in Russian (in particular, with the imperfective aspect).

The main question that was addressed in this dissertation relates to the kinds of generalizations that can be made as to why the AH may or may not be supported. In other words, under what conditions are the AH supported? One condition proposed in this study is the effect of task type. The current study focused on production data from different modalities (oral and written) and different planning levels. Tasks involving lower planning levels were generally more supportive of the AH, compared to the written task that involved a higher level of planning.

The other factors discussed in this study are closely interrelated, so they will be presented in a cause-effect type fashion. First, because of the morphological complexity of Russian

⁵⁵ In the data from all of the narratives and conversations, there were extremely few (fewer than 1%) novel verbs formed in the perfective.

aspectual system (namely, because the imperfective is morphologically unmarked, and the perfective can be marked with numerous affixes), Russian aspect is taught in a particular way: the imperfective (morphologically simpler) past tense form is introduced first. During the time of practicing only the imperfective, these learners may associate their L1 simple past tense form with the Russian imperfective, which then results in the preference of the Russian imperfective in the production of the past tense.

In examining these data within the sphere of input-based arguments in second language acquisition, this study seems to be the exception that proves the rule. The L1 and heritage learner studies outlined in sections 1.3.5.1-1.3.5.2 show that the associative and developmental predictions of the AH are supported, especially that the perfective past is acquired before the imperfective past. However, because the beginning-level L2 classroom learners in this study were not exposed to natural input, we see that they appear to acquire the imperfective first and use it as a default form. Salaberry (1999) found a similar result with his L2 learners of Spanish, and we can make some analogies between the two groups as to why this may be the case. Both groups of learners are in a foreign language-learning environment (they are not surrounded by their L2 outside of the classroom), and their L1 (English) is primarily inflected for tense and not for aspect (as it is in Spanish and Russian). The difference between the two groups is what they use as a default marker: L2 Spanish learners use the preterit (perfective), while the L2 Russian learners prefer the imperfective. Thus, I hypothesize that the AH is supported under natural learning conditions in both L1 and L2 acquisition, while the DPTH is supported only in the context where classroom foreign language learners with an L1 tense language (such as English, German, Swedish) are learning more aspectual languages (such as Romance and Slavic).

Although the present study is a sound first step in determining how aspect is acquired and produced in L2 Russian, the next section presents avenues of future research, and addresses a few questions that can be raised in response to this study's results.

4.2 FUTURE RESEARCH

One interesting question for future research relates to the role of input frequency. In particular, for naturalistic learners, input frequency (the distribution bias) plays a greater role in acquisition, which leads to the learners forming prototypes reflective of the AH. In addition to many L1 studies, L2 studies involving naturalistic learners often show support for the AH (e.g. Andersen, 1991; Rocca, 2002), while studies involving classroom learners do not always support the AH, or show only partial support (e.g. Salaberry, 1999; Bardovi-Harlig & Bergström, 1996; the present study). This then raises the question as to whether naturalistic learners of L2 Russian would follow the AH. It is predicted that naturalistic learners would likely show greater support for the AH, because of the natural input received, and is proposed as an avenue for future research. In addition to this, a comparison of classroom foreign language learners (such as those in the present study) and second language learners (those who are studying in a country where the L2 is the dominant language) would also address the role of input.

The topic of input frequency raises another interesting theoretical question: how would manipulating the order of instruction variable affect the degree to which the AH is supported? In other words, what would aspectual production among beginning-level learners look like if, when learning the past tense, they were introduced to perfective before the imperfective? Or, if they were introduced to the perfective simultaneously with the imperfective? In the L1 studies

(reviewed in section 1.3.5.1) that examined aspectual production in Russian-speaking children, the children tended to produce the perfective before the imperfective when expressing situations in the past tense. Would the same situation occur for L2 learners who are exposed to both perfective and imperfective aspect simultaneously? Because the lack of natural input (role of instruction) in the present study is discussed as a possible reason why the beginning-level learners preferred the imperfective as a default, specifically manipulating the order of instruction variable would be a necessary follow-up study to determine if it truly is a factor.

Possible L1 influence raises another interesting question that can be addressed in future research: Would learners of different L1s show different acquisition patterns in L2 Russian tense-aspect morphology? For example, would L1 Spanish speakers show a similar acquisition pattern in L2 Russian tense-aspect as the L1 English speakers? In other words would learners whose L1 is marked for aspect (like Spanish) behave similarly or differently from learners whose L1 is marked with tense (like English)?

By further examining the topics outlined above, future studies involving the L2 acquisition of Russian would have both theoretical and pedagogical implications.

APPENDIX A

FILM CLIP PLOT – *MODERN TIMES* (IN THE DEPARTMENT STORE)

The film clip begins with a commotion outside of a department store. Charlie and Paulette ask what is going on and find out that the night watchman has broken his leg. Seizing an opportunity, Charlie presents (forges?) a letter of recommendation to the department store manager and is hired on the spot as the new night watchman. After being shown his duties, and after the store has closed, Charlie invites Paulette in and they take advantage of all the store has to offer: they help themselves to some sandwiches and cake and then proceed to the toy department.

The couple decides to put on some roller skates and Charlie shows off his skating abilities, but it nearly comes at a price – because he is skating blindfolded, he does not see that the upper floor of the department is under renovation and comes dangerously close to falling and hurting himself. In the end, Paulette is able to warn him, and they then proceed to the bedroom display, where Paulette is seen trying on a fancy fur coat. Charlie then tells her that she should get some sleep because he has to make his rounds. After promising to wake her in the morning before the store opens, and tucking her in to bed, Charlie heads down to the main floor to start making his rounds.

As Paulette is sleeping, we see that three burglars have broken into the store. After Charlie gets to the main floor, he spots the three burglars. Mayhem ensues. The burglars use pistols to threaten Charlie and in the end, one of the burglars shoots into a barrel of rum, the contents of which spill into Charlie's mouth. As a result, Charlie starts to get a little drunk. After things settle a bit, one of the burglars recognizes Charlie as a fellow worker from the steel mill. The burglar explains to Charlie that they are not really burglars, they are just hungry and want to get something to eat. Then they all shake hands, pop open a bottle of champagne, and drink some more.

It's early morning and Paulette wakes up a little anxious. The store is opening soon and Charlie is nowhere to be found. Afraid of getting caught, she runs out of the store.

The store has opened and is busy with shoppers. The scene turns to the women's clothing department, where a woman is looking to buy some cloth or fabric. She finds something she likes, but cannot seem to pull it out from under the pile of fabric, so she gets a sales clerk to help. As the clerk keeps pulling and pulling, we realize that the "fabric" is really Charlie's shirt, and it becomes apparent that he had fallen asleep the previous night under a pile of women's clothing. The department store manager is called over, and he in turn phones the police. Charlie appears confused and likely a little more than hung over. The police arrive and lead him out of the store. A distraught Paulette, one of the many bystanders outside the store, looks on helplessly as Charlie is hauled off to jail.

APPENDIX B

SAMPLE BACKGROUND QUESTIONNAIRE AND TASK DIRECTIONS

General Background Information

Please answer the following questions. The contents of this form are **COMPLETELY** confidential. Information identifying the respondent will not be disclosed under any circumstances.

1. Date of birth (month, day, year): _____

2. Sex (circle one): M F

3. Is English your native language? (circle one) Y N

If not, what is your native language? _____

4. In which Russian course are you currently enrolled?

_____ Beginning Russian

_____ Intermediate Russian

_____ Advanced Russian

_____ Fourth-Year Russian

5. Have you studied abroad in a Russian-speaking country?
(circle one) Y N

If not, do you plan on studying abroad in a Russian-speaking country?
(circle one) Y N Maybe

6. Do you plan on taking Russian the following academic year (2010-2011)?
(circle one) Y N Maybe
7. What other languages have you studied? List language(s), if any, how long you have studied them, and in what context (in high school, in college, at home, travel abroad, etc.).

Language	Length of time	Context
_____	_____	_____
_____	_____	_____
_____	_____	_____

Task Directions

You will watch a short excerpt from a silent film. You will watch this film clip twice. After watching the excerpt for the second time, you will describe, in Russian, the events that occurred in the film.

You can begin your story with the phrases “Давным-давно” (a long long time ago) or “Однажды” (once upon a time).

B.1 BACKGROUND QUESTIONNAIRE AND TASK DIRECTIONS FOR NATIVE RUSSIAN SPEAKERS

Анкета

Ответьте на следующие вопросы. Этот опрос абсолютно анонимный, и невозможно будет опознать Ваши ответы.

8. М Ж

9. Дата рождения (месяц, день, год): _____

10. Родной язык: _____

11. Страна/город (родной): _____

12. Напишите, какие языки Вы изучали, как долго Вы их изучали, и в каком контексте Вы их изучали (напр., в школе, в университете, дома, и т.д.).

Язык	Как долго	Контекст
_____	_____	_____
_____	_____	_____
_____	_____	_____

Task Directions

You will watch a short excerpt from a silent film. After watching the excerpt, you will write/say, in Russian, the events that occurred in the film.

You can begin your story with the phrases “a long time ago” or “once upon a time”.

Посмотрите короткий отрывок фильма. После того, как Вы посмотрели отрывок, напишите/расскажите по-русски, что случилось в фильме.

Начните Ваш рассказ со фразой «Давным-давно» или «Однажды».

APPENDIX C

SAMPLE VERBS USED IN THE NARRATIVES BY LEXICAL ASPECT CATEGORY

Statives

xotet' 'to want'; *dumat'*, *čto* 'to think that'; *žit'* 'to live'; *moč'* 'to be able'; *naxodit'sja* 'to be located'; *znat'* 'to know'; *ljubit'* 'to love'; *nravit'sja* 'to like'; *bojat'sja* 'to be afraid'

Activities

rabotat' 'to work'; *igrat'* 'to play'; *katat'sja* 'to skate'; *iskat'* 'to look for/search'; *govorit'* 'to talk'; *guljat'* 'to walk/stroll'; *ždat'* 'to wait'; *spat'* 'to sleep'

Accomplishments

est'-s'est' + NP 'to eat + NP'; *pit'-vypit'* + NP 'to drink + NP'; *pisat'-napisat'* + NP 'to write + NP'; *otkryvat'-otkryt'* + NP 'to open + NP'; *čitat'-pročitat'* + NP 'to read + NP'; *arestovat'* to arrest'; *užinat'* 'to have dinner'; *idti v* + NP 'to walk to + NP'

Achievements

lomat'-slomat' 'to break'; *rešat'-rešit'*⁵⁶ 'to decide'; *priznat'* 'to recognize'; *prosnut'sja* 'to wake up'; *vyjti* 'to exit/step out'; *ujti* 'to leave'; *ložit'sja* 'to lie down'; *najti* 'to find'; *pojti* 'to set off'; *skazat'* 'to say'; *uznat'* 'to find out'; *poterjat'* 'to lose'

⁵⁶ This verb can also have the meaning 'to work on/solve a problem' (which would make it an accomplishment), but the use of this verb in the narratives was intransitive, with the meaning 'to decide'.

APPENDIX D

INDIVIDUAL DATA: WRITTEN NARRATIVES

Table 16. Individual data: Written narratives (Beginners)

Participant #	Imperfective				Perfective			
	St	Act	Acc	Ach	St	Act	Acc	Ach
4	2			1			4	7
6		5	3	1				6
8		4	1				2	3
12		4	2	2			3	2
14	3	4		2			1	5
16	1	1	3	2			2	5
19		1		1				3
21	1	2	4	1				5
25	1	3	3	1			1	3
27	1	2	2	1				8
29	3	5	3	1			2	0
34	6	4		4				4
39	6	9	1	2			2	7
42	3	1	1					5
43		8						3

Table 17. Individual data: Written narratives (Intermediate)

Participant #	Imperfective				Perfective			
	St	Act	Acc	Ach	St	Act	Acc	Ach.
2	1	4	1	3			1	7
7		1	1	1			1	11
9	3	3	1	1			1	5
10	2	5					2	10
11	4	4	1	1			3	7
18	4	4	2	4				3
23	4	2	1	3			2	7
24	4	4		1			3	6
32	3	7						7
33	2	2	1				2	5
36		4	2					2
40	7	9	2	2			1	3
41		3	3				1	10
44			1					

Table 18. Individual data: Written narratives (Advanced)

Participant #	Imperfective				Perfective			
	St	Act	Acc	Ach	St	Act	Acc	Ach.
1							2	8
3	4	8	1	1			5	13
5	8	7	2				2	14
15		5					4	9
17	3	3		1			3	18
20	1							3
22		1					1	2
26	6	7	2	1			3	11
30	1	4	2	2			1	21
31							1	1
35	5	3	2				3	10
37	7	8	2	2			1	10
38		5	2	1		1	6	10

Table 19. Individual data: Written narratives (Russian native speakers)

Participant #	Imperfective				Perfective			
	St	Act	Acc	Ach	St	Act	Acc	Ach
1	2	7		1			6	19
2	1	4	1				4	20
3	1	3	1				9	20
4	1	5		2			8	29
5	2	5		1			11	21
6	3	5		1			9	24
7		4				1	3	16
8								2

APPENDIX E

INDIVIDUAL DATA: ORAL NARRATIVES

Table 20. Individual data: Oral narratives (Beginners)

Participant #	Imperfective				Perfective			
	St	Act	Acc	Ach	St	Act	Acc	Ach
O11	1	3		2				6
O13								1
O20		2					1	5
O21	3	8	1	3			2	1
O22								
O24	4	4	4	1			1	1
O26		2						1
O28	4	13						8
O31		7						1
O32	9	2						6
O35								4
O44	8	6				1	1	11
O45								7

Table 21. Individual data: Oral narratives (Intermediate)

Participant #	Imperfective				Perfective			
	St	Act	Acc	Ach	St	Act	Acc	Ach
O1	1	6		1			1	1
O2	6	5	2					2
O4	6	5	1					8
O6	3	9	2					6
O15	6	2	6	3			2	7
O16	8	8	2				1	13
O17	2	5	4			1	3	13
O23	4	7	1	1				9
O25	1	2					1	2
O33	1	2						6
O34	4	2	3				1	9
O36	2	6	1					
O37	6	7	4					3
O39	3	4					1	5
O41		5					1	3
O43	6	3	3	2			5	9

Table 22. Individual data: Oral narratives (Advanced)

Participant #	Imperfective				Perfective			
	St	Act	Acc	Ach	St	Act	Acc	Ach
O5	3	4	1					5
O7	2	3					3	6
O8		1						3
O9	8	3	2	3		1	4	9
O12	2	3	3	3		2	4	17
O14		7	2	2			5	15
O18	4	4	1	5			4	17
O29	2	6	1	3			3	11
O30	4	2	3	1		1	1	15
O38		1		1				1
O40	2	5	2				2	14
O42		1				1	3	5
O46	4	8	4	2			1	16

Table 23. Individual data: Oral narratives (Russian native speakers)

Participant #	Imperfective				Perfective			
	St	Act	Acc	Ach	St	Act	Acc	Ach
RO1	3	6				2	2	16
RO2	1		2				12	31
RO3	4	7	4				3	24
RO4		5		1			5	20
RO5	1	4	1			2	9	14
RO6	2	6		1			3	14
RO7	6	5	3			1	13	41

APPENDIX F

TRANSLATION QUESTIONS

English-to-Russian Translation Questions (open ended)

Translate the following English sentences into Russian.

1. He read the book.
2. He was reading the book.
3. He had read the book.
4. He had been reading the book.
5. He has read the book.
6. He has been reading the book.

English-to-Russian Translation Questions (multiple answer)

1. What are the possible Russian equivalents for the English sentence *he read the book*? Check all that apply.

___ Он читал книгу

___ Он прочитал книгу

2. What are the possible Russian equivalents for the English sentence *he was reading the book*? Check all that apply.

___ Он читал книгу

___ Он прочитал книгу

3. What are the possible Russian equivalents for the English sentence *he had read the book*? Check all that apply.

___ Он читал книгу

___ Он прочитал книгу

4. What are the possible Russian equivalents for the English sentence *he had been reading the book*? Check all that apply.

___ Он читал книгу

___ Он прочитал книгу

5. What are the possible Russian equivalents for the English sentence *he has read the book*? Check all that apply.

___ Он читал книгу

___ Он прочитал книгу

6. What are the possible Russian equivalents for the English sentence *he has been reading the book*? Check all that apply.

___ Он читал книгу

___ Он прочитал книгу

Russian-to-English Translation Questions (open ended)

1. How does the Russian perfective (verbs like написал, прочитала, построили) translate best into English
2. How does the Russian imperfective (verbs like писал, читала, строили) translate best into English?

Russian-to-English Translation Questions (multiple answer)

1. What are possible English equivalents for the Russian perfective verb написал? Check all that apply.

☐ he was writing
☐ he wrote
☐ he had written
☐ he did write
☐ he had been writing
☐ he has written
☐ he has been writing

2. What are possible English equivalents for the Russian imperfective verb читала? Check all that apply.

☐ she was reading
☐ she read
☐ she had read
☐ she did read
☐ she had been reading
☐ she has read
☐ she has been reading

APPENDIX G

INDIVIDUAL DATA: ORAL CONVERSATIONS

Table 24. Individual data: Oral conversations (Beginners)

Participant #	Imperfective				Perfective			
	St	Act	Acc	Ach	St	Act	Acc	Ach.
B1	1	3	1					2
B2	1	4	1					2
B3	6	6	2					
B4								
B5	1	4						5
B6	1	5	2					2
B7								
B8								
B9	2							2
B10	3	1						
B11		2						1
B12		3	2				4	4

Table 25. Individual data: Oral conversations (Intermediate)

Participant #	Imperfective				Perfective			
	St	Act	Acc	Ach	St	Act	Acc	Ach
I1	1	12						3
I2	14	11	1				1	15
I3	2		1					3
I4	1	3		1				13
I5		1						
I6	1	4		1			1	3
I7	1							4
I8								
I9	2	1						1
I10	9	2						5
I11	2	4						1

Table 26. Individual data: Oral conversations (Advanced)

Participant #	Imperfective				Perfective			
	St	Act	Acc	Ach	St	Act	Acc	Ach
A1	6	3		1			3	19
A2	3	3	1			1	1	3
A3	8	3	1				3	8
A4	5	1	1	1				
A5	7	9	4					5
A6	2	7	2	1				9
A7	7	2		3			1	7
A8	10	6	1				2	11
A9	4	4	1			1	3	8
A10	2	3		1			2	15

Table 27. Individual data: Oral conversations (Russian native speakers)

Participant #	Imperfective				Perfective			
	St	Act	Acc	Ach	St	Act	Acc	Ach
RC1	19	13	2	1			10	33
RC2	25	17	6	5			13	53
RC3	9	4	1	4		1	6	16

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